



# ***JPRS Report—***

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# **China**

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# China

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**Political Life of Chen Yun Outlined**

*91CM0441A Hong Kong PAI HSING [THE PEOPLE] in Chinese Nos 238, 239, 240, 1991*

[Article in three installments by Chao Wei (6392 5588): "A Glance at Chinese Communist Super Elder Statesman Chen Yun's Political Career"]

[No 238, 16 Apr 91 pp 28-29]

[Text] **A Look at the Reasons For His Influence Today**  
Editor's Note: Mr. Chao Wei is the author of "Biography of Zhao Ziyang." He was formerly an assistant research fellow at the Institute of Modern History in the Beijing Academy of Social Sciences, and he is now a visiting scholar at Princeton University in the United States. Since super elder statesman Chen Yun has such great influence, currently influences China's economic policies, but is not very well known to most people, this article was written to give readers a better understanding of him. The data provided in it is full and accurate, and the arguments provided are incisive. Readers are asked to pay close attention.

**Maneuvers Among Various Political Groupings For 65 Years**

Chinese Communist heavyweight elder statesman Chen Yun, who is currently chairman of the CPC Central Advisory Commission, has maneuvered among various political groupings for 65 years. For the past nearly 60 years, he has been a member of the CPC Central Committee, Political Bureau. In the eighth party congress convened in 1956 he was a deputy chairman of the CPC Central Committee ranking right behind Mao Zedong, Liu Shaoqi, Zhou Enlai, and Zhu De. He led the CPC Organization Department and economic planning departments for a long time both before and after founding of the People's Republic. His disciples and subordinates are found throughout the CPC. During the war years, Chen Yun also served as deputy political commissar in a military region (the Northeast Military Region), and he has certain historical roots in military circles. After 1977, Chen's position became greater. Even Deng Xiaoping's rehabilitation was of great help to him. During the 1980's Chen Yun served consecutively in important positions as deputy chairman of the CPC Central Committee, member of the Political Bureau Standing Committee, first secretary of the CPC Central Discipline Committee, and chairman of the CPC Central Advisory Commission. For a long time he shared with Deng Xiaoping supreme decision making authority on mainland political matters. People called them the "two sages." Although Chen Yun has been old and feeble in recent years, and reportedly suffers from a serious illness, he is still very active and holds a very great amount of political influence. The fate, and the advances and retreats of such an important political personage have naturally long since been of importance to more than the person himself or his family. They have a direct bearing on the future direction in which the mainland political

situation develops. For this reason, the writer has written a brief critical account of Chen Yun the man and his deeds.

Chen Yun was born Liao Chengyun [1675 4453 0061] in 1905 at Qingpu County in Jiangsu Province. Today, this county is a part of Shanghai municipality, so Chen can claim to be from Jiangsu as well as from Shanghai. After graduating from senior primary school in his hometown, he entered the renowned Shanghai Commercial Press as an apprentice typesetter. After finishing his apprenticeship three years later, he became a regular typesetter. Therefore, in terms of his origins, Chen Yun is considered a classic worker cadre in the Chinese Communist "proletarian party."

In 1925 at the age of 20, Chen Yun entered the CPC. He very quickly took part in the famous Shanghai "30 May" movement to rally people in all walks of life to resist the Japanese shooting of Chinese workers. At the time, Chen Yun was young and full of spirit. He made a fine showing in battles, with the result that he was promoted to grassroots cadre in the CPC party organization. In 1927, the Chinese Communist organization suffered grievous losses in Chiang Kai-shek's "party purge" of the Kuomintang, and its general secretary, Chen Duxiu, was accused of being a leftist opportunist and stepped down. In the summer of 1928, The Chinese Communists convened the "sixth party Congress" in Moscow. Stalin and Bukharin maintained that the reason for the Chinese Communists' losses was not mistaken leadership, but because the party's leading cadre positions were controlled by intellectuals. There were too few workers in high level cadre positions; thus, a vigorous promotion of workers to cadre positions was decided. The CPC Central Committee general secretary position was held by a stevedore named Xiang Zhongfa [0686 1813 4099]. In terms of his origins, Chen Yun was also a worker cadre, so when this new policy was put into effect, naturally he was also one of those promoted. All of a sudden he became a member of the supreme provincial CPC committee at that time, the Jiangsu Provincial CPC Committee, and concurrently director of the labor department. When all the important CPC Central Committee personages assembled in Moscow to convene the sixth party congress, and Mao Zedong and Zhu De were leading the masses in guerrilla warfare at Jinggangshan, Chen Yun remained in Shanghai where he began to take part in CPC Central Committee propaganda work. His ability as a typesetter enabled him to take part frequently in work related to the CPC Central Committee official publications HONGQI [RED FLAG] and DOUZHENG [STRUGGLE]. At that time, the CPC Central Committee still did not devote serious attention to armed struggle. Propaganda work frequently took most of its energies.

In September 1930, the Li Lisan Line fell into disfavor within the CPC. Guided by the Moscow Communist International, the Third Plenary Session of the Sixth CPC Central Committee, which was presided over by Zhou Enlai and Qu Qiubai, rectified the Li Lisan line.

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Adroitly trimming his sails to suit the winds, Chen Yun entered the Central Committee during this time of changes in personnel. Later on, Xiang Zhongfa and Fu Shunzhang [7357 7311 4545], both high level CPC worker cadres, were arrested one after another by the Kuomintang. They betrayed the party, and were executed. This doubtlessly signalled the failure of Stalin's policy of workers serving as high ranking cadres to lead the CPC. The "28 and 1/2" Bolshevik cadres, including Wang Ming [3769 2494] and Bo Gu [0590 9657] held leading positions in the CPC Central Committee. However, Stalin was unwilling to countenance failure. He continued to insist on a strengthening of the worker cadre leadership in the CPC Central Committee. Thus, Chen Yun's position rose further. In the autumn of 1931, he entered the CPC Central Committee Political Bureau, and simultaneously served as party group secretary of the All-China Federation of Trade Unions. Although of working class origin, he was unlike the "blue collar" worker leaders. In today's terms, he was descended from "white collar" workers in that he had a certain amount of cultural knowledge. Thus, he was able to gain advantage from both sides during great historical changes and advance rapidly.

As a result of repeated depredations, by the autumn of 1932 the CPC Central Committee was no longer able to remain in the foreign concession of Shanghai. It had to go into the central soviet zone of Jiangxi. Thus, the CPC Central Committee began to fall within the sphere of influence of Mao Zedong; however, this marked the beginning of the Central Committee's contest with Mao Zedong's military power. Chen Yun also went along to the soviet zone of Jiangxi where he continued to serve as a member of the Political Bureau and concurrently secretary of the white zone work committee. While in Jiangxi, he also went through two Kuomintang encirclement and suppression campaigns, and Communist anti-encirclement and suppression campaigns. Nevertheless, he himself never personally was involved in military activities, nor did he directly hold a position in the armed forces.

In the autumn of 1934, the Chinese Communist Red Army suffered several military defeats in Jiangxi and was forced to make the Long March. Chen Yun moved with the army. In the Xiang Jiang campaign when half of its forces were lost, the CPC Central Committee merged the first and second columns of its Military Affairs Committee to form the Central Committee Military Affairs Committee column commanded by Liu Bocheng with Chen Yun as political commissar. This column was divided into three echelon formations commanded by Deng Fa [6772 4099], He Changgong [0149 7022 1562], and Luo Mai [5072 6701], Li Weihan [2621 4850 3352]. Clearly, Chen Yun's position at that time was already very powerful.

In January 1935 at the Zunyi Conference, which established Mao Zedong's leadership of the entire Chinese Communist Party, Chen Yun was one of the five or six formal members of the Political Bureau in attendance.

Chen's support of and usefulness to Mao at that time was considerable. Although both Yang Shangkun and Deng Xiaoping attended the conference, neither were CPC Central Committee members at that time (to say nothing of being Political Bureau members). Yang Shangkun was "added" to the conference at that time as a regimental commissar in the Third Red Army, and Deng Xiaoping attended only in the capacity as a worker keeping the minutes of the conference. Of course, Deng actually had no small role at the conference. He was a trusted subordinate of both Mao and Zhou, and he controlled conference procedures. Looked at from this angle, Chen Yun might be said to be the Chinese Communist elder statesmen having the greatest qualifications and record of service now alive. Following the Zunyi Conference, Chen Yun was responsible for relaying the spirit of the conference to Red Army cadres at the regimental level and above. Several years ago, CPC historians discovered an original handwritten document about the Zunyi Conference, which proved to have been written in Chen Yun's hand.

#### Early Eulogizing of Mao Zedong

After the forces on the Long March crossed the Jinsha Jiang, Mao Zedong realized that he had broken through a heavy encirclement and that the military pressures he was facing were less. He then began to worry whether the power he held would be recognized by Stalin's Third International in Moscow. At that time, the CPC was a branch of the Third International, and even though a matter of primary importance such as a change in the supreme leader was accomplished in an isolated environment of change in the fortunes of war, without Moscow's approval, it would be hard to make it "legal." Thus it was that Mao Zedong sent Chen Yun, who was well regarded in the Third International, as an envoy to Moscow. After leaving home, he went to Shanghai where he boarded a Russian ship for Vladivostok from which he went on to Moscow where he reported the situation to Stalin to gain his approval. At the same time, he asked that the Soviet Union provide material support to the beleaguered Red Army.

Chen Yun left the military ranks in May 1935 to travel by a tortuous route. When he reached Moscow, it just happened to be 20 August, the opening date of the eighth congress of the Communist International. When Chen Yun and his entourage arrived at the conference, none of the Communist Party delegates from other countries know what severe losses the Chinese Red Army had sustained on the Long March, or its very precarious situation. They believed that the Chinese Red Army was on the verge of victory, so they accorded Chen Yun and his entourage a hero's welcome. This was Chen Yun's first trip outside of China.

Later on, Chen Yun reported the situation in China to Stalin and Wang Ming [3769 2429]. He particularly emphasized that Mao Zedong was in control, the hardships of the armed forces, and the complete loss of all military bases. On the basis of the firsthand information

that Chen Yun provided, Stalin began to be inclined to agree that Mao Zedong should take the number one post in the Chinese Communist Party. In formulating the Chinese Communists' anti-Japanese united front policy, Wang Ming and his group changed the former slogan of oppose Chiang and resist Japan to unite with Chiang to resist Japan. This was a very important policy change for the Chinese Communists.

At that time, Wang Ming seemed to be leader of the entire Chinese Communist Party, or at least he was the real "head" of the CPC in the Soviet Union. Many CPC personnel in Moscow shouted "Long Live Comrade Wang Ming" at meetings. Chen Yun, who had just left China, was well aware how terrible Mao Zedong's methods could be, and he also realized that Wang Ming would not be a future match for Mao Zedong. Consequently, he lauded Mao Zedong at every meeting, and he also wrote brief accounts of the Long March (termed the Western March at that time) for Third International publications, which extolled Mao Zedong as the main CPC leader. The pen name that Chen Yun used at that time was Shi Ping [2467 1627]. These actions naturally played a role in paving the way for Mao Zedong to place him in important positions later on.

#### **The Meritorious "Three Ministers Who Followed the New Emperor"**

In November 1937, several months after the outbreak of the all-out war of resistance to Japan, a Soviet military airplane carried Wang Ming, Kang Sheng [1660 3932], and Chen Yun to Yanan together where they were welcomed by important CPC Central Committee personages. In order to demonstrate his power to Wang Ming, Mao Zedong went so far as to issue an order for the review of a several hundred man honor guard. At a meeting, Mao Zedong purposely declared that he did not have the tiller of the party under firm control, and he asked Wang Ming to come to work. Although arrogant, Wang Ming also realized that he could not take Mao's place at this time. Mao already had plenty of assistants who had gone through the Long March, so Wang quickly said he had no desire to strive for leadership. Actually, even before Wang Ming returned to China, Stalin also realized that he could not stand as an equal to Mao Zedong. Later on, Wang Ming was appointed by Mao as secretary to the CPC Central Committee Chang Jiang Bureau, and he made arrangements for him to enjoy the limelight in Wuhan and other cities. Meanwhile, Chen Yun and Kang Sheng remained with Mao Zedong. Chen Yun, who was considered a "minister who followed the new emperor" who had proven himself at the Zunyi Conference, was appointed to the important position of head of the Central Committee's Organizational department. Kang Sheng, who had sensitive political instincts, immediately abandoned Wang Ming and aligned himself with Mao Zedong. He was appointed chairman of the Central Committee Social Affairs Department (an intelligence organization). He had training and experience in this field while in the Soviet Union.

During the entire eight years of the War of Resistance Against Japan, Chen Yun remained in Yanan where he was in charge of the Central Organization Department. This had a great deal to do with his power base. During the rectification period in Yanan, since he did not belong to the faction that had been in Russia, and since he had taken part in the the Long March and supported Mao, Chen Yun emerged safely from the tribulations. Of course, he also vigorously criticized Wang Ming, and greatly praised Mao Zedong Thought.

#### **Became Member of Northeast Bureau**

In August 1945, following the hard-won victory in the War of Resistance Against Japan, the battle between the Kuomintang and the Communists intensified at once. For a time China's northeast became a key area in the contest between the Kuomintang and the Communists. At that time, the Soviet Red Army had defeated the Japanese Kwantung Army and occupied the northeast, but did not administer it well. After 40 years as slaves without a country, the people of the northeast fervently desired to return to the bosom of the motherland. A unit of the Eighth Route Army captured Shanhaiguan after which it boarded trains and entered Shenyang where it got into a dispute with the Soviet forces. The Soviet Army thereupon dispatched a colonel by air to Yanan to ask the CPC Central Committee to send a high-ranking official to the northeast to take charge and restrain other local forces. At that time both Mao Zedong and Zhou Enlai were in Chongqing negotiating with Chiang Kai-shek. Liu Shaoqi was in charge at Yanan. The CPC Central Committee held an all-night Political Bureau meeting to discuss the situation in the northeast. At that time, the Soviet Union had already signed a Sino-Soviet treaty of alliance and friendship with the Nationalist government in Chongqing which provided that authority in the northeast be handed over to the Nationalist government. Therefore, some at the meeting counseled against a rash dispatch of troops to the northeast because the Soviet Army would not be able to countenance them easily. They would not only make a futile journey, but they might also miss out on wresting from the Kuomintang the spoils of war from resistance to Japan south of the Great Wall. Liu Shaoqi felt, however, that this was a fine opportunity such as occurred but once in a thousand years, and that a high-ranking official had to be sent to take charge, and a large army sent to the northeast at once. At the meeting, Liu Shaoqi also examined the text of the Sino-Soviet treaty of alliance and friendship. He noted the clause that read "all Chinese military forces and civilians are to be under authority of the Chinese Government," and he said: "Our Eighth Route Army is Chinese military forces and civilians; the Soviets cannot control us. Never mind that." The meeting decided that Peng Zhen, Chen Yun, and Wu Xiuquan [0124 0208 2938] would make up the CPC Central Committee Northeast Bureau. On the following day, they boarded the same Soviet aircraft that had arrived in Yanan to fly to the northeast to oversee the overall situation. Later on, Mao Zedong also realized the importance of the

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northeast and sent Lin Biao as the ranking person in charge of military matters in the northeast. He also transferred Luo Ronghuan's [5012 2837 2719] Eighth Route Army in Shandong to the northeast by both water and land routes, and he transferred the third division of Huang Kecheng's [7806 0344 6134] New Fourth Army in northern Jiangsu to the northeast in a vigorous build up.

After entering the northeast, Chen Yun served first as a member of the CPC Central Committee Northeast Bureau located in Shenyang. Later on, the Northeast Bureau retreated to Harbin under attack from the Nationalist Army. Chen Yun then served concurrently as political commissar in the Soviet Army zone of northern Manchuria. Gao Gang [7559 1511] was the commander. At that time, one-third of the members of the Central Committee that the seventh party congress had elected were in the northeast. Clearly the Chinese Communists placed great importance on wresting the northeast from the Kuomintang.

[No 239, 1 May 91 pp 28-29]

**[Text] Chen Yun's Sole Combat Achievement**

In July 1946, Chen Yun became deputy political commissar of the Northeast Democratic United Army whose commander and political commissar was Lin Biao. There were a total of four deputy political commissars, namely Peng Zhen, Luo Ronghuan, Gao Gang, and Chen Yun in order of their ranking.

In 1946, Chen Yuan was once again sent along with Xiao Jinguang [5618 0513 0342] to the Chinese Communist south Manchurian Military Region where they became respectively political commissar and commander. This assignment in south Manchuria was Chen Yun's sole direct involvement in military affairs, and every time that Chinese Communist historians have mentioned it during the past several years, it is deemed a "glorious page" in the history of Chen Yun. At that time the Nationalist commander in the northeast was still Tu Yu-ming [2629 5124 2494]. Under repeated attacks from Tu, the Chinese Communist forces were driven back all the way from Shanhaiguan to the Songhua Jiang where the Nationalist and Communist forces faced each other from opposite sides of the river. Behind the Nationalist forces lines in south Manchuria, the only forces that the Communists had were six divisions in two columns, and one base, which became a cause for concern for the Nationalist forces advancing northward. Given these circumstances, Tu Yu-ming decided on a combat strategy of "first in the south and then in the north." He concentrated the main force of more than 10 divisions for an attack on Communist forces in south Manchuria, driving them all the way to the banks of the Yalu River and occupying Andong. He was swollen with arrogance. As a result of numerous defeats in south Manchuria, the Communist forces were filled with anxiety, and were preparing to cross the frozen Yalu River in a retreat into North Korea from which they would turn

around later to enter north Manchuria. It was at this time that Chen Yun and Xiao Jinguang assumed their positions as political commissar and commander. After studying the situation, the two men decided not to retreat from south Manchuria, but to remain there and deal with the Nationalist forces. This decision was also in keeping with the two men's status and position. For this commander and political commissar who had just been appointed to the south Manchuria Military Region to retreat to northern Manchuria would have been tantamount to losing their official positions. At the time, Chen Yun had talks with the cadres, each of which subsequent Chinese Communist historians lauded. Chen Yun said that if we retreat from south Manchuria now, the Kuomintang will certainly concentrate all its strength to attack north Manchuria. Denied support from south Manchuria and with no Kuomintang forces tied down there, we may not be able to hold fast; then we have to retreat into the Soviet Union. But we are Chinese Communists; how can we remain in the Soviet Union for long? We would have to fight our way back. Fighting our way back into northern Manchuria would cost at least several tens of thousands of lives, and if we go on from north Manchuria to fight our way back to south Manchuria, another several hundred thousand lives will be lost. However, if the 30,000 to 40,000 men that we now have in south Manchuria hold fast, the Kuomintang will be unable to solve the problem in south Manchuria, much less will it be able to overwhelm northern Manchuria. We will have hope of winning. In the overall scheme of things it will be worth it even if these two columns in south Manchuria are wiped out. Thus, Chen and Xiao were able to persuade the cadres to continue to hold on. In the end, they turned back the Nationalist Army's attack against south Manchuria and reversed the combat situation. As a result of this battle achievement, Chen Yun was promoted to deputy secretary of the CPC Central Committee Northeast Bureau. The secretary was Lin Biao.

In November 1948, the Chinese Communist forces won the decisive battle for Shenyang in which large Nationalist forces numbering several hundred thousand were annihilated. Chen Yun took charge of the takeover of Shenyang. Shenyang was the largest industrial city in the northeast with a dense population and numerous factories and mines. It was also the first large city that the Chinese Communists occupied. In preparation, Chen Yun trained and made ready thousands of cadres in the suburbs of Shenyang, and he specially deployed garrison forces to study the status and location of Shenyang's various factories, mines, and official agencies. Once the city changed hands, they entered the urban area to take them over one by one. Not only was there no destruction of the city, but industrial production was put on the right track very quickly. Furthermore, a body of experiences and methods was distilled for the takeover of cities. Mao Zedong was concentrating all his forces now for a strategic decision against Chiang Kai-shek, so he urgently required a stable rear area and an increase in armaments production. Consequently, he paid very great attention

to experiences in taking over Shenyang, issuing a special circular notice throughout the party praising it. Prior to this time, the Chinese Communists had taken several medium-sized cities, but all had been very badly damaged. Not only had no benefit been obtained from them, but they became a burden. Production could not be revived for a very long time to say nothing of the people's livelihood. The political effects were even worse. This made Mao Zedong very anxious. He worried that it might wreck his efforts to take all of China. Now that the emphasis of Chinese Communist efforts was shifting from rural villages to cities, Chen Yun, who had been a worker in Shanghai, who had traveled to the Soviet Union, and who handled matters very dependably, emerged to meet the challenges of the times. He began to become a person on whom Mao Zedong especially relied.

#### **Chen Yun's Position Second Only to That of Mao, Liu, Zhou, and Zhu**

Following the founding of the People's Republic of China in October 1949, Chen Yun became a deputy premier of the State Council and concurrently chairman of the Finance and Economics Committee as well as minister of heavy industry. He distinguished himself in the field of economic reconstruction. Reportedly Chen Yun was one of the few members of the Political Bureau who unequivocally opposed Communist China's entry into the Korean war. This certainly was in keeping with his disposition and logic. "Just straighten out the problems in one's own house before bothering about what is going on in the houses of others" runs a Chinese saying. Actually, during that year when he was in south Manchuria locked in bitter struggle against the Nationalist Army, he was grateful to Kim Il-song of North Korea for the great amount of material assistance he provided. Naturally in a matter of great import to the armed forces and the country such as sending troops into Korea once Mao Zedong, given his temperament, made the decision, Chen Yun said nothing. Only during the time when Mao Zedong permitted everyone to express an opinion did he speak.

During the first several years following the founding of the People's Republic, the Chinese Communists revived the economy fairly rapidly, cleared away the scars of war, and stabilized prices. The industrial and mining enterprises imported from the Soviet Union enabled a great increase in the industrial growth rate. This was a "golden season" economically for the Chinese Communists. Chen Yun put a great deal of effort into these achievements, and consequently his position in the party rose notch by notch. At the eighth party congress in 1956, he was elected deputy chairman of the Central Committee to enter the supreme Chinese Communist leadership nucleus in which Mao, Liu, Zhou, Zhu, Chen, Lin, and Deng were the chairmen and deputy chairmen of the Central Committee. Deng Xiaoping was the general secretary of the Central Committee. Chen Yun ranked

fifth after Mao, Liu, Zhou, and Zhu. His position rose. At that time, the Chinese Communists had been fighting for several decades, so they were adept at warfare. People with numerous combat achievements could be found everywhere; however these people were good at destruction but ignorant about construction. It was during this specific historical period of time that Chen Yun's talent came to the fore as he gave free play to his ambitions. Naturally, Mao Zedong's high regard and confidence provided him a flexible and solid foundation.

Good things never last long however. The boundlessly ambitious Mao Zedong was not content to build in the conventional way. He just had to resort to combat style construction campaigns such as "more, faster, better, and more economical building of socialism," and after 1958 came the Great Leap Forward, the "people's communes," and the "large scaled smelting of steel." Chen Yun was cold-shouldered to the sidelines. During the criticism of Peng Dehuai at the Lushan Conference in 1959, Chen Yun did not say a word, declare his position, or give anyone a handle they could use against him.

In early 1961, the CPC Central Committee convened a "meeting of 7,000 people" to readjust the collapsed economy. Then Chen Yun came forward to work together with Liu Shaoqi, Zhou Enlai, and Deng Xiaoping. When Mao Zedong saw the great disaster he had created that caused people throughout the country to have no food to eat, all he could do was retreat to the "second line." He left Beijing to roam around the south. Chen Yun proved to be an old hand at readjusting the economy. Within a year or two after he became the head of the Central Finance and Economics Team, results were apparent. The people had food to eat again. The situation did not sink to the point where there were starved bodies. Actually this "achievement" was also very pitiful. It did nothing more than give the people the right to exist.

Later on, Mao Zedong was unwilling to see power fall into the hands of others while his own ideal of "large in size and collective in nature" [i.e., the people's communes] was wiped out. Thus, he launched a counterattack against Liu and Deng under the motto "never forget class struggle." As soon as Chen Yun saw that the look of the situation was not favorable and knowing full well that Mao Zedong was no one to provoke, he retracted his head once again and said nothing. Liu Shaoqi and Deng Xiaoping continued to do battle with Mao Zedong, however. Naturally this was something that Mao Zedong, the master of the universe, could not tolerate. He was particularly displeased that people referred to Liu Shaoqi as Chairman Liu after he became president, that on trips abroad with his wife he accepted with equanimity shouts of "long life" from the people in landlord countries, and that Liu acquiesced in a holiday issue of RENMIN RIBAO carrying two huge photographs of the same size of Mao and Liu. Therefore, in early 1965, Mao Zedong decided to get rid of Liu Shaoqi.

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**Comes Under Attack Because of His Wife During the Cultural Revolution**

In 1966, the rampage of the "Great Cultural Revolution" began. Like wild horses that had slipped their halters, Red Guards could not be restrained once unleashed. At the 11th Plenary Session of the Eighth Party CPC Central Committee that was convened in August of the same year, Lin Biao became the sole deputy chairman in the CPC Central Committee. The deputy chairmanships of Liu Shaoqi, Zhou Enlai, Zhu De and Chen Yun were no longer mentioned (although they were not formally abolished). Subsequently, Liu and Deng were termed a bourgeois headquarters and subjected to fulsome attacks. Zhou Enlai labored alone to carry on while Chen Yun, who was worldly wise and playing safe, never confronted Mao Zedong head on. He was simply cold-shouldered instead of being directly attacked. This had a very great deal to do with his never having had direct jurisdiction over a department, so there were not many "revolutionary masses" against him with which to contend. Chen Yun was still able to preside at celebrations right up until the national anniversary of 1 October 1968. By that time, an overwhelming majority of the old Chinese Communist cadres had come under attack.

During the "Cultural Revolution," Chen Yun did face trouble within his family when he became implicated in his wife's problem. Chen Yun had a wife named Yu Ruomu [0060 5387 2606] who had gone to Yanan as a young female intellectual in 1938. She had always worked in a government organ after the founding of the People's Republic. It was probably during the period when she worked in the northeast that Yu Ruomu began to dislike Lin Biao and Ye Qun [0673 5028]. Yu Ruomu's temperament was different than Chen Yun's; she was extremely impatient. Finally in 1969 when Lin Biao was riding the crest of popularity, she put up an anti-Lin Biao big character poster in her own name at the "7 May Cadre School" in rural Hunan. She denounced Lin as "a careerist who raises the red flag to attack the red flag." Needless to say, Yu Ruomu was very quickly labeled an "active counterrevolutionary," jailed, and investigated. The focus of the investigation was on whether Chen Yun had been an instigator. Naturally, Chen Yun, who had been careful and prudent his whole life long, would not have dared instigate his own wife to do such a "conspiratorial" thing. Yu Ruomu had never discussed the matter with Chen Yun; she had rushed into great calamity all by herself. Even though no evidence was found that Chen Yun had been an instigator, this incident was nevertheless an extremely great blow against Chen Yun. This Yu Ruomu with her tough disposition might also be said to be a woman with great strength of character. An incident similar to this one occurred in which the wife of Lu Dingyi, Yan Weibing [0917 1414 0393] wrote an anonymous letter to Lin Biao's wife attacking her. The difference was that the letter of Lu's wife was anonymous, and it attacked the individual's private life. By contrast, Yu Ruomu's letter

was public and signed, and it was a political attack. Lin Biao was unconcerned. As a result, the predicament of Chen Yun's wife was somewhat worse than that of Lu Dingyi's wife. The leaders of the Central Committee at that time included many extremely combative people. Once these people had great power in their hands, serious internal strife could scarcely be avoided.

Politically Chen Yun considers himself to be orthodox. He absolutely adhered to the "four upholds." Economically, he advocates a planned economy and the centralization of power. His famous "bird cage theory" long ago spread far and wide inside and outside China. The so-called "bird cage theory" holds that socio-economic activity is like a bird that hops about all over the place. It can only be confined to a cage; it cannot be permitted to fly about as it pleases. As to how large this cage should be, that depends on specific circumstances. If it is too small, that is bad for economic growth; if it is too large, troubles may occur. In view of the limitations of Chen Yun's own historical "successful experiences" in surmounting difficulties under a despotic system, their application to today's rapidly developing and changing economic activity is, no doubt, of more negative than positive significance. That an old man more than 80 years old holds such views is not at all strange, but if the economy of a large country with a population of 1.1 billion operates under guidance of such a very limited theory, there can be great problems.

**Becomes the Elder Statesman With the Greatest Decision-Making Authority**

Chen Yun was a powerful force in the "anti-spiritual pollution" campaign of 1983 and the "anti-bourgeois liberalization" campaign of 1987, as well as in the campaign to topple Hu. He frowned upon the new political and economic situation following mainland reform and opening to the outside world. Chen Yun's loyal supporters are in the Central Organization Department system, the State Planning Commission, the Financial and Economic Committee, and the banking system. The supremely arrogant Li Peng, Yao Yilin, and Song Ping who have held power in recent years are all adherents of Chen Yun. In addition, since Chen Yun is from Shanghai, and there has been an open or a hidden "Shanghai clique" in the CPC Central Committee in recent years. Central Committee Secretary General Jiang Zemin, who hails from Shanghai, is naturally one of them. However, granted that Jiang's rise to power was Deng Xiaoping's decision, Chen Yun also recommended him. Without Chen Yun's approval, Deng Xiaoping alone would not have been in position to decide this important matter of the choice of a successor. Still another member of the Central Committee Political Bureau Standing Committee who comes from Shanghai is Qiao Shi. He is also in close association with Chen Yun. Among the members of the Standing Committee today, it seems that only Li Ruihuan cannot claim any association with Chen Yun, so he is now in decline.

Chen Yun and Zhao Ziyang have no common origins, and Chen Yun has long been dissatisfied with the "tricks" that Zhao Ziyang promoted. Before the campus unrest, Chen Yun urged Deng Xiaoping to consider

changing his successor, but the time was not ripe then. Nevertheless, Chen Yun has his own views about the 4 June Tiananmen incident. He believes that reform confused people's ideology, and that Deng Xiaoping tolerated it at first, not handling it properly for a time with serious consequences. He believes that matters did not have to reach this pass, and that the use of a field army to solve the campus unrest was an unwise decision that can never be recouped. Indeed, had Chen Yun's circumspection and farsightedness been employed, matters might not have reached such an irretrievable state. Historically, Chen Yun has played this kind of "Monday morning quarterback" role more than just once or twice. Reportedly, Chen Yun did not also agree with further major criticism of Zhao Ziyang, much less a public trial of Zhao. Of course, neither does he approve a rehabilitation of Zhao. Recently Chen Yun has also specially approved the party registration of Yu Guangyuan, Hu Jiwei, Li Chang, and Li Rui, who are Central Advisory Commission members inclined toward democracy. Since there is no blood on his hands, there is a very great difference between Chen Yun and Li Peng and Yang Shangkun. He always proceeds from the CPC's overall interests. He fears creating further splits in the party or even "overturning the boat."

[No 240, 16 May 91 pp 62-63]

[Text] In view of Chen Yun's increasing influence in the current CPC, and Deng Xiaoping's declining reputation since 4 June, Chen Yun has probably in reality become the most decisive senior statesman in the CPC. As a matter of fact, Chen Yun holds a trump card for partially rehabilitating the 4 June event, and the card is most beneficial to his interests. This card is to place equal blame on Deng, Li, and Yang and the so-called "black hands" behind the students, dividing responsibility between the two sides so that he can pose himself as always being correct. Whether he will play this trump card will depend on the development of and changes in Mainland China's political situation. If he should play the card, people will at least feel a little better after their anger is vented, and most middle- and high-ranking CPC cadres may also show consent. This is because the act will not jeopardize their own interests, and it may possibly alleviate people's resentment and discontent.

Chen Yun's base of power lies in the party's organizational system and in the departments of central economic planning. These two systems can control the state and the party. Chen Yun is not totally excluded from his say in the military. Since he used to be vice political commissar of the Fourth Field Army, he also has some relationships with the military. The Fourth Field Army used to be the CPC's largest military unit. At its peak, it had over 1 million soldiers. When Lin Biao was in power and awesome, the military was practically controlled by the Fourth Field Army. Just like officials who rose and fell with their emperor, cadres from the Fourth Field Army lost their backing from the Central Committee after Lin Biao's downfall, and the army's strength and

power thus declined drastically. When Chen Yun's position was rising, some cadres from the Fourth Field Army came to Chen Yun's camp. Historically speaking, they could be said to be under Chen's command, and so what they did was justified. Two years ago, Chen Yun attended a conference on compiling a history of the Shenyang, Liaoning Campaign. At the conference he emphasized that Lin Biao had made some contributions to history, and that his anti-party action in later years should not affect cadres from the Fourth Field Army. Such words certainly sounded pleasant to the ears of those cadres. Unnoticed, Chen Yun has in reality become the greatest backing figure for those cadres.

#### Battle of the Young Successors

Chen Yun has a son named Chen Yuan. He is just a little over 40, but is already a man-of-the-hour in China's politics. Chen Yuan was a senior in the Fourth Boy's School in Beijing during the Cultural Revolution. He withstood some tests when he went to the countryside in the later years of the Cultural Revolution. In 1978, he enrolled in the Economic Research Institute of the China Academy of Social Sciences, pursuing a master's degree, and graduated in 1981. Ordinarily it would have been a simple matter for him to go abroad to study. However, Chen Yuan decided to enter politics, which is a "prosperous road" for the children of high-ranking officials in Mainland China. Chen Yuan started as the vice party secretary of Beijing's Xicheng District. The position's rank was at the level of department and bureau (a district party committee in Beijing is equivalent of a prefecture party committee in a province). He then became a member of the standing committee of the Beijing Municipal Party Committee. This position was almost equivalent to that of a vice minister. There was a group of intellectuals under Chen Yuan. Naturally he was the core. About three or four years ago, he became dissatisfied with his position and wanted a further promotion to be party secretary of the Beijing Municipal Party Committee (a member of the Secretarial Committee of the CPC Central Committee). However, at that time Hu Yaobang was carrying out internal party reform. Thus there was a regulation that members of the municipal party committee had to be elected by party member representatives (the party secretary and standing committee members would be selected by party committee members). Chen Yuan entered the election contest; he failed because representatives were so resentful of children of high-ranking officials participating in politics that they refused to vote for him. The unexpected blow to the ambitious Chen was devastating. Objectively, based on his ability plus Chen Yun's position, Chen Yuan might well take the office of secretary of the municipal party committee under the current system on the mainland. Many high officials' children who are less capable than Chen hold high positions.

Despite his failure in the election, Chen Yuan was not ignored as the son of the revered Chen Yun. He was directly appointed as vice president of the People's Bank of China by the prime minister of the State Council. This

was the position of a real vice minister, and got him around being an elected official. The case of Chen Yuan could then be closed. Quite a few children of high officials have taken appointment "short-cuts" since they cannot win elections. Of course, there are exceptions. For instance, Liu Shaoqi's son, Liu Yuan, was elected vice governor of Henan Province. Generally speaking, people in large cities and offices are more open-minded, and they are therefore more resentful of nepotism. In local and backward regions, however, people hope that local leaders have some behind-the-scenes support and can compete for local interests.

Today, Zhao Ziyang and his youth group have collapsed. A series of young people like Chen Yuan will come forward. In the past, there were "battles of young successors" among young and middle-aged children of high officials.

#### Senior Officials Are Clean of the Blood of "4 June"

"Although the supernatural tortoises live long lives, their days will come to an end." In today's political arena in Mainland China, the only heavyweight senior officials are Deng Xiaoping, Chen Yun, and Yang Shangkun. Their respective ages are 86, 85, and 83. Because each of the three has his own power system and political preferences, and because each bears different responsibilities for the 4 June Event in Tiananmen Square, the order of their withdrawal from the political stage, and even from life's stage (sometimes the two stages are the same, sometimes not) is truly crucial. The order may even be related directly to the political direction Mainland China will take in the future; to the seesawing relationship between various political and economic forces; and to the political situation and security of Hong Kong and Taiwan. It may be asserted that whoever lives longer will be able to fully enforce his own policies and select the most trustworthy successor. Such is the real and practical issue. The fate of the Chinese people for this period is simply controlled by three aged men, all in their 80's. It really is the tragedy of the time. Deplorably, we cannot deny this reality. Suppose the order of the deaths of Mao Zedong and Zhou Enlai had been reversed. The historical development would have been very different. The current political situation in China is very similar to that of 1976 in this regard.

In a word, because he is the super senior political figure in the CPC who is clean of the blood of 4 June event, Chen Yun's existence has a certain stabilizing function, and he is striving to play such a stabilizing role. The death of any of the three senior officials will cause the present fragile balance of power to lose its stability. Almost certainly, the day that Deng Xiaoping, Chen Yun, and Yang Shangkun disappear from life's stage will be the starting point for a new round of power struggles at the top levels in China.

The Ninth National Party Congress held in April 1969 pushed the Cultural Revolution to its highest possible peak. Chen Yuan still was a member of the CPC Central Committee. However, he was sitting on the right side of the platform along with other senior figures, such as Zhu De and Chen Yi. His political influence was barely detectable. They were there because Mao Zedong wanted them there, to show the superficial unity of the party. Chen Yuan was also pretty miserable in his personal life. His wife was detained on a charge of "acting counterrevolutionary," and he was unable to even see her.

#### A Top Decision Maker Along With Deng

After the downfall of Lin Biao in 1971 for the "13 September" event, the situation with Chen Yun and other senior cadres took a turn for the better. His wife was freed. But the Jiang Qing clique was in full power, and Mao Zedong still secretly held the belief that "Chen Yun can't be given a position, particularly an important position." Thus at the 10th National Party Congress Chen Yun was still an ordinary member of the CPC Central Committee. It was not until the Fourth National People's Congress that he became an insignificant vice president of the congress, acquiring the title of "leader of the party and state." One might generally say that Chen Yun was a typical "political tight-rope walker" in the Cultural Revolution. He did not suffer much, but he did not have an easy life either.

When Mao Zedong died, the Jiang Clique was brought down and Hua Guofeng became the "wise leader." Hua had only shallow roots in the party, therefore he was envious of Chen Yun's previous high position, and refused to bring him to power. At the 11th National Party Congress in 1977 Chen Yun was still just a member of the CPC Central Committee. His historical position was totally denied by Hua Guofeng. As a result, Chen Yun had to be determined to fight against Hua Guofeng. He rallied a large number of senior cadres for a promotion drive, to have Deng Xiaoping come to the front of the scene. At the same time he was playing the public opinion card, exerting pressure on Hua Guofeng by using the democratic force of the democracy wall in Xidan. When Deng Xiaoping regained power, the Deng-Chen coalition against Hua eventually took the upper hand at the Third Plenary Session of the 11th CPC Central Committee held in December 1978. Deng Xiaoping took the decisive position of vice chairman of the CPC Central Committee and chief of the general staff of the military. Chen Yun also became a vice chairman of the Central Committee, and first secretary of the Central Commission for Discipline Inspection. Later, the joint efforts of Deng and Chen beat Hua Guofeng completely and put Hu Yaobang and Zhao Ziyang on center stage, as general secretary and prime minister respectively. After Ye Jianying passed away, Deng and Chen became the only top political decision makers in China, thus gaining the reputation of "two emperors," or the empress dowagers of the eastern and western palaces, "holding court from behind the screen."

## NATIONAL AFFAIRS, POLICY

### Enterprises Face Difficulties

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[Article by Wang Xiaosheng: "The Difficulties Presently Faced by Large-, Medium-Sized State Enterprises, and Causes and Corresponding Policies (Part 2)"; part 1 was published in JPRS-CAR-91-041]

[Text] To overcome existing difficulties and for long-term development, we must regard the invigoration of large- and medium-sized state enterprises as the starting point and foothold in all work. The fundamental way out lies in persisting, unswervingly, in continuing reforms. From an immediate perspective, it is first of all necessary to begin with policy, and adopt feasible measures to combine the solution of large- and medium-sized state enterprises' existing difficulties with long-term development, and combine deepening enterprise reforms with creating external conditions.

#### First, adhere to the guiding idea of invigorating enterprises; maintain continuity and stability in policy.

We must continue to adhere to policies and measures that the practice of the 10 year reform has proven to be effective for enhancing the enterprises' vitality, promote production, further implement "The Enterprise Act," and adhere to the system of plant-director responsibility. Enterprises must be given the management autonomy clearly provided for in the relevant laws, regulations and policies of the state. Governments at all levels and the departments in charge of enterprises should regard the invigoration of enterprises, especially large- and medium-sized state enterprises, as the starting point and foothold in their work, seriously examine the implementation of enterprise autonomy, and clean up their independently issued documents, of which those not in line with the spirit of the party center's and the State Council's regulations on invigorating enterprises must be immediately repealed or corrected.

#### Second, continue to adhere to and perfect the contracting responsibility system for enterprise management.

During the Eighth Five-Year Plan, it is necessary to take the contracting system as the main management mode for invigorating large- and medium-sized state enterprises, and continuously develop and perfect it in practice, making full use of the management mechanisms that are a combination of the stimulating and restraining of the contract system, encouraging more profit creation and retention by enterprises, and arousing the enthusiasm of enterprises and all employees, to ensure the steady growth of the state's fiscal revenues. Large- and medium-sized enterprises can gradually acquire the abilities of independent accumulation, self-transformation, and self-development, and achieve a benign input-output cycle. As for large- and medium-sized backbone enterprises enjoying the state's focal support and bearing

heavy tasks of technical transformation, contract base figures should be determined reasonably in relation to the particular situations of the tasks of technical transformation, so as to maintain and stabilize the profit-retention levels needed for enhancing large- and medium-sized enterprises' capabilities for sustaining development. The contracting time frame for large- and medium-sized enterprises must be in line with the enterprises' cycle of major technical transformation.

In the new round of enterprise contracting, it is necessary to include in contracts such items as technical renovation, loan repayment, circulating-fund replenishment, management enhancement, and economic-efficiency improvement, thus establishing, for the purpose of strengthening the enterprise restraining mechanism, a comprehensive system of contracting-examination criteria which are a set of three criteria, the economic efficiency criterion mainly consisting of profit criterion, the development-sustaining ability criterion mainly concerning technical transformation, and the management criterion mainly concerning the improvement of enterprise quality; it is necessary to distribute the various contract-stipulated tasks, assigned to enterprises by the state, to such levels as those of workshops, teams and individuals, through the enterprises' internal economic responsibility systems, thereby embodying the spirit of enterprise-wide participation in contracting and of sharing risks together.

#### Third, reasonably determine enterprises' taxes, and effectively reduce enterprise burdens.

During the Eighth Five-Year Plan, the state should not introduce new taxes or fees. The departments concerned should clean up and simplify the existing categories and rates for taxes and fees. In accordance with the requirement of the state's industrial policies, appropriately reduce the product taxes and value-added taxes for short-supply-based industries as well as resource taxes for mining enterprises. It is necessary to re-examine and readjust the tax systems governing public, collective, township, and other enterprises, unifying tax policies, so as to create conditions of competition on an equal footing for large- and medium-sized enterprises.

We must lower interest rates on bank loans, and in accordance with the state's industrial policies implement differential interest rates on the basis of distinguishing different industries and enterprises. Banks' interest rates should be adjusted at appropriate points of time according to the state of the national economy and the levels of the enterprises' economic efficiency, so as to gradually reduce the interest burden for enterprises, thereby promoting enterprise production.

We must grant large- and medium-sized enterprises reduction or exemption regarding energy and transport funds, and extra-budgetary adjustment funds in a planned, step-by-step way. From 1991 on, energy, transport, basic materials industries and large- and medium-sized backbone enterprises enjoying the state's focal

support and heavy tasks of technical transformation, will first be fully exempted from delivering, as required by the regulations, the "two funds" to come from the depreciation funds; and to be granted a full reduction of the "two funds" to come from profit retention by the end of the Eighth Five-Year Plan. As for other large- and medium-sized enterprises, it is necessary to grant gradual reduction and exemption on the basis of increasing production and income, in accordance with the state's industrial policies.

**Fourth, enhance technical transformation, and promote the enterprises' technical progress.**

The present insufficiency of technical transformation funds is a prominent problem; the way out lies in multi-channelled fund-raising. Presently three measures should be adopted:

With regard to large- and medium-sized state enterprises, the policy of repaying loans before taxes is to be continued during the Eighth Five-Year Plan. With regard to large- and medium-sized enterprises in line with the state's industrial policies and with heavy tasks of technical transformation, banks should provide priority guarantees on funds and adopt such preferential policies as on charging low or zero interest, according to the enterprises' particular situations of technical transformation projects. With regard to some old large- and medium-sized backbone enterprises enjoying the state's focal support, bearing heavy tasks of technical transformation, and having weak loan-repayment capabilities, it is necessary, after approval, to implement the policy of exempting them from turning over taxes and profits for a certain period of time after the going into operation of the projects, and of using the profits and taxes to expedite the loan repayment.

Gradually raise the rates of depreciation of fixed assets for large- and medium-sized state enterprises. With regard to large- and medium-sized backbone state enterprises in line with the state's industrial policies, with heavy tasks of technical transformation, and with good economic efficiency and abilities to endure, it is necessary to allow them to independently raise the depreciation rate within the scope provided for in regulations. At the same time, to solve the contradiction regarding insufficient replenishment of fixed assets, it is necessary to select some large- and medium-sized backbone enterprises, with heavy tasks of technical transformation, to be trial points for assets reassessment and for depreciation based on the reassessed values.

Establish new-product development funds. With regard to large- and medium-sized backbone enterprises enjoying the state's focal support, having quick technical renovation, and possessing potentials for export and foreign-exchange earning, it is necessary to implement the policy of retaining new-product development funds based on sales revenues. According to the enterprises' different situations, the new-product development funds

should be retained at the rates of 1 to 3 percent, to be counted as cost, listed under a separate entry, and used as special-purpose funds.

**Fifth, we must reset and supplement the amount of fixed-amount circulating funds for large- and medium-sized state enterprises, and gradually alleviate the tight situation regarding the enterprises' circulating funds.**

Resetting the amount, and replenishing the enterprises' fixed-amount circulating funds should be carried out in a planned, step-by-step way. In view of the state's present fiscal burdens, we should mainly have trial points in large backbone enterprises enjoying the states' focal support and having large gaps in circulating funds during the Eighth Five-Year Plan. Sources for replenishment of the enterprises' circulating funds are: one, enterprises are to retain a certain proportion of annual sales revenues, to be counted as cost and used as special-purpose funds. Two, contracting agreements are to clearly provide for the amount for annual circulating-fund replenishment to come from profit retention, with strict examination. Other large- and medium-sized enterprises are to independently provide gradual replenishment on the basis of increasing production and income; and there would be planned overall implementation only after the conditions are ripe. With regard to the newly constructed enterprises that have been completed and have become operational during the Seventh Five-Year Plan, the state should allocate sufficient starting circulating funds for the enterprise, so that they can quickly produce returns. In planning future key construction projects, the state should, on the premise of taking full account of the price factor, include starting circulating funds in the total investment budget-estimates, leaving no gaps in funds, so as to avoid the situation of projects not being able to become operational normally after completion.

**Sixth, we must further expand large- and medium-sized state enterprises' autonomy in production management.**

With the deepening of economic systemic reform and continuous maturing of the market, departments concerned should further reduce the number of categories as well as quantities of the large- and medium-sized state enterprises' products under mandatory planning, increase the share of the enterprises' products to be marketed by themselves, and push enterprises towards being more market-oriented, giving play to the role of market mechanisms. With regard to the products which must be allocated by the state according to mandatory plans at the present stage, it is necessary to put aside a certain appropriate proportion to be governed by the method of allocating the products according to state plans and of determining the prices within the limit of the state maximum prices through negotiation between the two sides of supply and demand.

We should select backbone state enterprises that have the necessary conditions to be given autonomy regarding international economic activities, including autonomy concerning negotiations with foreigners, direct import

and export, and missions and offices abroad, according to the state's industrial policies and the actual needs of the enterprises' production management; and to adopt supporting policies to encourage them to make use of the advantage of industry-trade integration, to develop markets internationally, and to increase products export, technology export and labor-service export to earn more foreign exchange for the state.

**Seventh, with large backbone state enterprises as the core, develop enterprise groups, and adjust enterprise organizational structures.**

The emphases in developing enterprise groups now should be: first, to formulate policy measures to actively encourage and support large backbone enterprises to develop multi-regional, multi-industry, and multi-leveled enterprise groups through such means as stock buying, acquiring holding interests, and enterprise mergers. Second, to perfect and improve the existing enterprise groups, strengthening the links between the assets of the member enterprises, and strengthening the group cores. Third, to perfect the enterprise groups' management system for production and operation, so that the enterprise groups may gradually acquire the multi-leveled, multi-layered management system consisting of three levels, that is, an investment center, a profit center, and a cost center. With regard to the extraordinarily large enterprise groups which play a significant role in the national economy, it is necessary to implement the method of having separate entries in the state plans and of reaching comprehensive contracting agreements with the state; and they should be entitled to the coverage of the relevant state policies, and to greater management autonomy, including foreign-trade autonomy, investment decision-making authorities, intra-group fund-transferring authorities and such fund-raising authorities as on issuing stocks and bonds to society.

**Eighth, it is necessary to adopt effective measures to ensure production conditions for large- and medium-sized enterprises.**

In order that large- and medium-sized state enterprises affecting the state plans and people's livelihood can play a greater backbone role for the development of the national economy in a stable environment, the departments concerned should continue to implement and really put into effect the tilting policies to provide large- and medium-sized enterprises with priority guarantees and focal support in terms of financial and material resources, and carry out comprehensive planning and arrangement concerning the large- and medium-sized enterprises' production, technical transformation and plans on new-product development. For all mandatory-plan tasks, the state should provide comprehensive, coordinated arrangements with regard to production, supply, marketing and operation. Energy, funds and raw and other materials allocated to enterprises according to state plans should be given to enterprises directly, so as to reduce withholding along the way.

**Ninth, further deepen enterprises' comprehensive internal reforms, and enhance enterprise management.**

Large- and medium-sized enterprises must continue to consolidate and perfect the results and achievements gained with regard to their internal personnel, employment and distribution systems in the last few years, and persist in implementing the principle of distribution according to work; and should adopt varying and flexible modes of distribution, linking the employees' income to the enterprises' efficiency as well as the individuals' work results, and appropriately enlarging the income differentials, so as to reward the diligent and punish the lazy, and to arouse the employees' enthusiasm. In enterprises with the necessary conditions, it is necessary to continue to proceed with labor-composition optimization, and to gradually establish the enterprises' internal mechanisms for employee competition.

We must improve large- and medium-sized enterprises' management standards. Current work should emphasize quality, variety and efficiency, pushing the enterprises to look inward so as to dig out internal potentials, to endeavour to improve product quality, to adjust product structure, to lower material consumption, and to improve economic efficiency, thereby gradually achieving the transformation from the speed type into the efficiency type.

**Tenth, endeavour to create stable and relaxed external environments for enterprises.**

We must adopt further administrative and economic measures to alleviate weak markets. The state should further relax the intensity of the "double tightening," increasing investment on such key construction projects as those of energy and transport, and relaxing control on the large- and medium-sized enterprises' projects of technical transformation; and should formulate preferential policies to vigorously support the production of foreign exchange-earning enterprises so that they may improve their competitiveness and make their way into the international market.

It is necessary to do a good job of cleaning up the "triangle debts," to ensure the large- and medium-sized enterprises' funds recovery. It is necessary to adopt forceful measures to compel those units deliberately delaying payment to settle their debts, and to pay interest as well as penalty interest on the debts, thereby tightening up financial discipline.

It is necessary to speed up the establishment and perfection of social security systems, to gradually open up the social labor-service market, and to facilitate the rational flows of the labor force, thus creating conditions for providing appropriate placement for the enterprises' surplus employees so as to further improve the enterprises' labor efficiency.

We must enhance economic legislation, and complete and strengthen enforcement machineries for economic laws to safeguard the enterprises' legitimate rights and

interests. Governments at all levels and the departments in charge of the enterprises should, proceeding with this as a major item in improvement and rectification, suppress such erroneous practices encroaching upon the enterprises' interests as "unreasonable fines, fees and levies" on the enterprises, deepen reform, and proceed with building clean-government, doing that persistently so as to create good external environments for the enterprises.

### Group Surveys 10 'Double Guarantee' Enterprises

91CE0663A *Beijing JINGJI GONGZUO TONGXUN /ECONOMIC WORK NEWSLETTER* in Chinese  
No 8, 30 Apr 91 pp 10-12

[By Zhou Shungeng (4900 5293 5087), Hu Zhenhai (5170 2182 3189), Wang Dong (3769 2639), Li Mingzhi (2621 2494 1807), and Liu Xiaofei (0491 4869 2556): "Survey Report on the Southwest Economic Situation—from the State Council Production Committee"]

[Text] We recently held informal talks with leading members from the economic committees of Yunnan, Guizhou, and Sichuan provinces and Chengdu, Chongqing, and Kunming cities and conducted surveys of 10 "double guarantee" enterprises, including the Yunnan Electronics Equipment Plant and the Yunnan Smelter, and selected key enterprises.

#### 1. Current Industrial Production and Economic Efficiency in Yunnan, Guizhou, and Sichuan Provinces

This year, owing to gradual implementation of a series of measures adopted by the State Council to encourage the market and promote production, the market has to some extent changed for the better, production has tended toward steady growth, and the economy has developed in a proper direction. However, the basis for production growth is still fragile, economic efficiency has not made a marked change for the better, and declines in some regions are still large. The economy as a whole still is not on a course of favorable cycles.

Yunnan, Guizhou, and Sichuan's industrial output value accounts for approximately 8 percent of total output value nationwide. Production during January and February has shown continuous growth. Its chief characteristics have been: 1) the dominant position of national industries having strengthened (national industries in the three provinces having increased 8 to 16 percent); 2) the chief energy industries, such as coal and electrical power, having continued to show steady growth; 3) the brisk buying and selling during the holiday market having stimulated well known and up-to-date products of the light and textile industries—products which have a ready market; and 4) increased investment in fixed assets having brought about growth in the raw and semifinished industries for machinery and electrical equipment.

However, following the upswing in the pace of production, except for Yunnan, economic efficiency in the two provinces and three cities experienced varying degrees of decline. In Yunnan, during January and February, budgetary industrial output value increased 32 percent, income from product sales increased 15 percent, and profit taxes increased 21.2 percent. The main reason was the excessively low base figures for the same period in 1990. Sichuan's budgetary industrial output value increased 22.8 percent, income from product sales only increased 9.1 percent, profit taxes declined 40.4 percent, and profits declined 119.8 percent. Guizhou's budgetary industrial output value increased 15.3 percent, income from product sales increased 20 percent, profit taxes remained the same, and profits declined 77 percent. As a preliminary analysis, the following three paragraphs sum up the main reasons for the upswing in production and decline in economic efficiency.

—Profits realized by enterprises were effected by "four shifts." An analysis of the situation in Sichuan shows that, first, there was a shift in individual income, for example, the 1990 fourth quarter wage and salary increases for workers and staff personnel and its aftermath this year; second, price rises brought shifts in the transport sector; third, "profits shifted to interest." Funds for finished goods increased 23.2 percent in January and February, compared with the same period last year, with the net increase in finished goods funds accounting for 1.21 billion yuan and with the newly increased loans shifting to banks up to 100 million yuan in spending for interest; and fourth, the "three disturbances" are still quite serious and enterprise profits, with respect to various government departments and society, have shifted, possibly accounting for approximately as much as 20-30 percent of the profits retained by enterprises.

—Market sales have not basically improved, and lower prices for products have reduced profits. Owing to the contradiction of insufficient overall demand and insufficient structural demand existing simultaneously, certain machinery and electrical equipment products, light and textile industry products, and raw and semifinished products have not had a ready market with regard to price, variety, and quality. This has forced a drop in prices and caused profits to give in to sales. There has been growth and increased sales but no increase in revenue.

—Enterprise management is not good. Mainly, it is the emergence of the "two irons and one egalitarian" (iron armchair, iron rice bowl, and egalitarianism). This has led to lax management, lower efficiency, increased losses, and reduced profits.

Each province is paying close attention to this new situation of having an upswing in production and a decline in efficiency. They are now studying and analyzing the issue and gradually formulating measures to turn losses into profits.

## 2. Unfold Activities for "The Year of Quality, Variety, and Efficiency"

Following the State Council issuing its decision on launching nationwide activities for "The Year of Quality, Variety, and Efficiency," the three provinces and three cities, to ensure they were launched properly, set up leading small groups for taking part in these activities. The groups are made up of principle leading comrades of the provincial and city governments and the principal responsible comrades of pertinent departments, committees, offices, and bureaus. Various industrial offices have likewise set up appropriate leading small groups. At each level, people have been put in charge, and based on the actual local situation, serious studies have been made and surveys repeatedly done. The three provinces and three cities have, as a result, issued specific goals with respect to these activities and formulated realistic and feasible measures. Their common points are:

—Intending to make product quality extremely prominent, they have conscientiously strengthened management. In January, Chongqing put on a citywide comparison exhibition of industrial product quality, displaying 171 products from 19 industrial departments. As many as 10,000 people attended. Based on comparison with international and domestic advanced standards, 233 problems were found and 324 measures were put forth for their rectification and reform. Obvious results were thereby achieved. In February, Sichuan held a provincewide report exhibition on counterfeit, false, bogus, and inferior products whose cases had been investigated and disposed of. The exhibition is to go on tour to enhance society's awareness of quality throughout the province.

—They are combining the launching of activities for The Year of Quality, Variety, and Efficiency with strengthening enterprise management and improving the quality of the enterprises themselves. The three provinces and three cities are now energetically rectifying and augmenting field management, rigorous technological requirements, labor discipline and job responsibility, and various rules and regulations, thereby strengthening business accounting and strict financial discipline. They are actively disseminating and utilizing various effective methods and techniques of modern management in order to advance standards of enterprise management to even higher levels.

—They are combining the launching of activities for The Year of Quality, Variety, and Efficiency with vigorous promotion of enterprise technological advancement and readjustment of product mix. The Sichuan production committee, in conjunction with the science committee, is conducting activities calling for bids on how to speed up transforming the results of scientific research into productive forces in order to give impetus to enterprise S&T progress. Yunnan has also held an exhibition on technological achievements.

## 3. Invigorating Large- and Medium-Sized Enterprises

The three provinces and the three cities have paid close attention to invigorating large- and medium-sized enterprises. Following the national working conference on enterprises, many meetings were held to conduct studies and discussions, to do overall planning, to delegate responsibility to the various levels, and to make conscientious dispositions. In this way, suggestions were drawn up for each province to further invigorate large- and medium-sized enterprises. Around the time of the Spring Festival, Sichuan provincial CPC Committee and provincial government dispatched two working groups to go into the enterprises to conduct surveys and do studies and to solicit views from all sides. Through detailed analysis, the groups drew up 12 suggestions for further invigorating large- and medium-sized enterprises. They will be submitted for discussion and disposition to the Sichuan work conference on urban economies to be held in mid-April. Guizhou has drawn up 10 suggestions and Yunnan 32. Some provinces have repeatedly revised their suggestions.

Current policies and measures being drawn up by the three provinces and three cities have mainly focused on the following several aspects:

—They vigorously promote the "right of enterprises to make their own decisions." They demand that laws, regulations, and policies issued by the state for invigorating enterprises be resolutely and thoroughly implemented. Sichuan has proposed that, like clean government and tax investigations, joint working groups should be organized to check up on and make point by point investigations of government and departmental implementation of relevant policies, such as the State Council's "Ten Points for Expanding Authorities." Guizhou provincial government has already instructed leading members of its economic committee to launch a conscientious investigation of how policies to invigorate enterprises have been implemented in order to determine what the situation is and how to deal with it. Yunnan has also stipulated that, when departments formulate policies and provisions pertaining to enterprises which run counter to those issued by the State Council to invigorate enterprises, the department policies and provisions must be examined and approved by the same level leading small group to invigorate enterprises before they can be issued.

—They are appropriately reducing the variety and quantity of products governed by mandatory planning and gradually expanding the number of large enterprises that sell products through their own channels to encourage enterprises to move toward the market and to transform their mechanisms. The three provinces and three cities have, in a planned and controlled manner, delegated to selected key enterprises authority to set product prices. For some products, enterprises are permitted to bring in higher priced materials and sell the finished goods at higher prices [gao jin gao chu, 7559 6651 7559 0427]; they have the authority to determine regional and seasonal price

differences for products outside the plan and above prescribed quotas; and designated enterprises can dispose of certain overstocked goods according to market conditions.

—They have adopted firm measures to alleviate enterprise burdens. Sichuan recently issued a "Notice on Reducing Various Types of Enterprise Investigations and Appraisals and on Criteria Governing Investigations and Appraisals," and "Suggestions for Standardizing Various Types of Business Appraisals, Completion Schedules, and Acceptances." The provincial government requires that relevant departments which are readjusting various investigations of enterprises to facilitate management at different levels must report to the provincial production committee. After examination and approval, it is arranged on the basis of overall planning. Yunnan provincial government has set forth that integrated investigations of enterprises be done where possible, that departments that have not been assigned investigations are not, without receiving special authority, to arrive at an enterprise to investigate, and that investigations beyond normal business operations must be coordinated and approved by the leading small group for invigorating enterprises.

—They have stepped up putting a new round of contracts into effect. Any of the many types of contracts used in the past which were effective can continued to be used. Various localities required that everyone implement a second round of contracts during the first quarter of 1991 and that enterprise management be strengthened, that plans be administered rigorously, and that everything possible be done to increase production and improve efficiency.

#### 4. Outside Production Conditions of "Double Guarantee" Enterprises

The three southwestern provinces (including the listed cities) together have a total of 25 "double guarantee" enterprises. Following the national conference on enterprises, each locality conducted further studies and made additional dispositions. At the end of February, Yunnan convened a special meeting of seven "double guarantee" enterprises in the province in order to achieve a balance of production conditions outside the enterprise, to implement "first guarantee, then distribution" for electric power, and to give priority assistance to transportation, petroleum products, and funds. In January and February, industrial output value for the seven enterprises grew 13 percent compared with the same period in 1990 and realized profits grew 3.4 percent. According to information from the three provinces, the chief problems that the "double guarantee" enterprises have are, first, continuing difficulties with market sales, and second, tight funds, thereby making delayed repayment of loans a serious problem. For example, finished goods funds at the seven "double guarantee" enterprises in Yunnan rose 61.5 percent compared with the same period in 1990.

#### 5. Progress in Controlling the "Three Disturbances"

In compliance with the requirements of CPC Central Committee document No. 16 (1990) and the unified planning of the national leading small group on bringing the "three disturbances" under control, the three provinces and three cities have set up special leading small groups and offices to implement unified leadership, to facilitate management according to affiliation, and to administer a division of labor in order that each entity have its own responsibilities. In addition, they have provided clear-cut guiding ideology, taken advantage of the breakthrough in controlling the "three disturbances" to correct current unhealthy tendencies in various trades and industries, and they have defined the scope of check-ups, setting forth specific targets and measures.

At present, although the work of bringing order to the "three disturbances" has already begun in a comprehensive manner in the various provinces and cities, because of the longstanding nature of various taxes, fees, and assessments, such aspects as targets and scope still have not been clearly delineated. Consequently, even though the central government and local authorities have given repeated orders to curb the "three disturbances," they have not been very effective. Some regions and departments still continue to impose assessments.

From our discussions and survey, we feel that with respect to the current industrial and economic situation, we must consider the steady upswing of production while continuing to develop its positive aspects, but at the same time, we must calmly analyze issues and conscientiously take into consideration our low economic efficiency, unsuitable distribution links, and the economy's inadequate reserve strength, factors that make the situation relatively serious. We have combined some of the views of leading comrades of the provincial and city economic committees and of certain enterprise directors and set forth below several suggestions for improving the next stage of work:

—Continue to take as a point of departure encouragement of the market and invigoration of funds to promote steady growth of industrial production. The insufficiency of overall demand still seems relatively prominent in the Southwest. It is suggested that each locality, first, continue to encourage the capital goods market by increasing the scope of investments in fixed assets and by encouraging enterprises to make technical renovations; and second, expand the sphere of household consumption by encouraging the consumer goods market, especially with the building of merchandise shops. As far as funds are concerned, to restore the system of collection and acceptance and resolve reasonable problems pertaining to unpaid money, the state must stipulate that, if after collection there is no acceptance or another's funds are held and used for a long time, then the opposite party must pay interest. Every link in the chain of collection and acceptance

must be firmly implemented. Auditing departments should supervise banks, financial administration, and enterprises.

—To improve conditions outside enterprises, reform within enterprises must be deepened and economic efficiency enhanced. Enterprise directors commonly report that, recently, because of undue emphasis on stability, "everyone eating from the same pot" and egalitarianism are having something of a comeback. There is no distinction being made between who works and who does not and between who does a good job and who does a poor job. This is why we have to clearly affirm the results and the role of the reform in the preceding 10 years with respect to labor, personnel, and distribution. Subject to planning and control of overall wages, we must permit enterprises to decide on their own whether to increase or reduce manpower, optimize labor organization, continue to try out labor contracts, and further perfect methods of work efficiency and let them select for themselves the type of "distribution according to labor" they want to use and let them open up gaps in distribution, thus promoting various types of reform within the enterprises and benefitting reform.

—Prominence should be given to technical progress by replacing older generation products with new ones and by readjusting product mix. This will beef up the reserve strength of the economy.

During discussions with chiefs of the economic committees, everyone was of the opinion that enterprises should be allowed to become the principal focus of investment for updating technology. With respect to current state policies such as revaluation of fixed assets, all the effort has been toward raising depreciation rates and gradually avoiding the "two funds." However, the amounts apportioned are still too small, and policies must be liberalized even more and procedures for approvals simplified. The important thing is not to have to rely on administrative means but to use economic levers more, thereby enabling enterprises to truly become independent producers characterized by self-transformation and self-development.

—Various policies to invigorate large- and medium-sized enterprises should be put into effect as soon as possible. Comrades from the three provinces of Yunnan, Guizhou, and Sichuan suggested that not only should central government policies to invigorate large- and medium-sized enterprises and policies to expand product sales through an enterprise's own channels and to improve the depreciation system be tried out on the state's "double guarantee" enterprises, but that local "double guarantee" enterprises and large- and medium-sized enterprises that meet the criteria should also be included and that localities be given more latitude and specified limits of authority. They also suggested that in principle it be stipulated that provinces have the authority to select a number of key enterprises, which are efficient, able, and have links

with the province's financial administration, to likewise implement appropriate policies, thereby expanding the invigoration of enterprises.

### Article Views Industrial Restructuring

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[Article by Chen Zuhuang (7115 4371 3552), edited by An Luming (1344 6424 2494): "Readjustment of China's Structure of Industries: Difficulties, Causes, Countermeasures"]

[Text] To study and analyze difficulties in readjusting the structure of industries, as well as their profound causes, is of practical significance in correctly understanding the strength of such readjustment, in avoiding causing impacts on the economic development, in smoothly implementing the state's industrial policies, and in realizing a steady economic growth.

#### I. Difficulties in Readjusting the Structure of Industries

A main reason that we made little progress in readjusting the structure of industries is that there were many difficulties in our actual work.

##### (A) Readjustment of the assets-inventory structure

The key to readjusting the assets-inventory structure is a reasonable mobility and reorganization of the means of production (including capital, technology, and manpower). Generally, the major choices were: To merge and change the production of enterprises; to conduct lateral joint operations and specialized cooperation among enterprises; to auction, transfer, or lease enterprise assets or to turn them into equities; and so forth. In reality, however, we faced many difficulties in this respect.

1. To merge and change the production of enterprises. Originally, this was the most practical way of readjusting the structure of industries, and it caused the least impact. However, we made almost no progress in this aspect. This was mainly because enterprises, whether the mergerer or the merged enterprise, lacked the enthusiasm and initiative on merging. When merging with another enterprise, the mergerer first encountered problems concerning debts incurred by the merged enterprise. In most case, such an enterprise was not willing to repay old debts incurred by the merged enterprise. But this was not agreed by its banker if it refused to repay the debts. The second issue was about the evaluation of assets of the merged enterprise. Interests of the merged enterprise would be adversely affected if the assets were underestimated; or the burden on the mergerer would be increased if the assets were overestimated. The third issue was that the merger of enterprises would affect the interests of their competent departments, particularly the local fiscal authority, so that obstacles often appeared in practice. The fourth issue was a thorny one about the resettlement of workers hired by the merged enterprise. The factory director of the merged enterprise was worried that he

might lose his job; whereas the workers were worried that they might become unemployed or might lose their bonuses and welfare after the merger. Therefore, it was often the case that they opposed the practice of merging.

When changing the line of production, an enterprise must first need a large sum of funds. Nevertheless, banks generally refused to grant loans to an enterprise that had poor performance in selling its existing products, or one that suffered losses. This was particularly true when the money supply was intensified. Consequently, in order to survive in the austerity period when products were overstocked, an enterprise spent its major efforts on promoting the sales of its products, and it was most likely that such an enterprise would find no time to develop new products or to change its line of production.

2. To conduct joint operations and specialized cooperation among enterprises. Theoretically, this was an effective way to put an end to an unreasonable organization and structure of industries. But this was more difficult to implement. At present, most of our enterprises are under a particular department or local authority. It was inevitable that we had to break through this restriction if we preferred joint operations and specialized cooperation among enterprises. This was detrimental to the interests of such departments or local authorities, thereby becoming an obstacle to the work. In addition, there were enterprises which, in consideration of their interests, particularly those which were affected by the small-scale agricultural production approach, lacked the necessary initiative in joint operations and cooperation.

3. To auction, transfer, or lease enterprise assets or to turn them into equities; and so forth. Since a system of state-owned assets was yet to be formed, relations concerning the rights and duties of assets were not clear. Various policies, laws, and regulations were imperfect; and there were different markets for different means of production. Thus, it is difficult to make any breakthrough point in this respect.

#### (B) Readjustment of the structure of incremental assets

The key to readjusting the structure of incremental assets was to make the investment direction conform to the requirements of the state's industrial policies. There were many choices in this respect. The major ones were: To increase the input in basic industries such as agriculture, energy resources, transport, and so forth; to slow down the growth rate of general processing industries to such a level that corresponded to the growth rate of the basic industries; to transform and reorganize the processing industries so as to enhance the level and extent of processing; to support the development of high and new technology industries; and so forth. In order to achieve these, however, we had to face many difficulties.

1. Limits on the aggregate investment amount. At the preliminary stage of industrialization, the actual investment amount allocated for capital construction was limited because of the weak economic strength. If we gave priority to basic industries such as agriculture,

energy resources, transport, and raw materials when utilizing such limited investment amounts, we could not get any results in the short term because such scale of investments was large, and they required long-range operations. In particular, their correlation coefficient with the basic industries was so low that their results in promoting other industries were not so good as machine-building and chemical industries. Therefore, it took a rather long time to readjust the existing structure of industries by changing the investment methods, and it would be impossible to make any breakthrough points in the short term.

2. Influence of the investment system on the orientation of investment. After reform and opening up, and in the wake of decentralizing the authority of examination of investment projects, the investment subject has become diversified. While the proportion of budgetary projects dropped annually, that of projects financed by self-raised funds increased. It was obvious that the investment has become diversified. If there were no explicit, restrictive policies toward macroeconomic investment, it was very difficult to guarantee that under this investment pattern the investment subject would act according to the industrial policies. Thus, some local authorities and departments pursue their interests and invest their funds in projects that are favorable to their regions and departments, which tends to bring about arbitrary and duplicated construction.

3. The nonstandard acts of government, irrational pricing mechanism, regional protectionism, market separation, and so on affected readjustment of the structure of industries.

In addition, certain new problems that emerged following the rectification and consolidation also made things difficult in the readjustment of the structure of industries.

(a) Administrative means marked by "indiscriminate" acts. In the early days of rectification and consolidation, our powerful austerity principle toward financial affairs and credit covered all enterprises, no matter whether an enterprise yielded good economic results, whether a project was a long-range one, or whether such an enterprise was engaged in trade encouraged by the state. This was not only a violation of our original goal of readjusting the structure of industries, but also temporarily stopped the growth of industries and posed obstacles to the process of readjusting the structure of industries.

(b) Employment pressure and social stability. The original goal of readjusting the structure of industries was to close, stop, merge, and change the production of enterprises that did not conform to the state's requirements for industrial development. But this would force a number of enterprises to close down, would make some workers lose their jobs, and might affect social stability. In addition, we must act in a fair and efficient manner as we are a socialist country. Though many enterprises were on the brink of bankruptcy, the state could not but

support them. Since enterprises could not go bankrupt and workers could not go unemployed, it was very difficult to transfer assets.

(c) The lack of self-accumulation ability among enterprises. Under the current financial and taxation systems, enterprises shouldered a heavy economic burden and were weak in self-accumulation. It had long become their practice that they operated by receiving loans. The continuously sluggish market, which began the year before, had caused enterprises to keep a large amount of inventory and intensified the capital supply. Under these circumstances, it was very difficult to readjust the composition of products made by enterprises or to develop new products on a large scale.

## II Causes for Difficulty in Readjusting the Structure of Industries

There were many in-depth factors for the difficulty in readjusting the structure of industries. These factors intertwined and inter-reacted with each other, and jointly checked the process of readjusting the structure of industries.

(A) Price factor: A distorted structure of industries was caused by a distorted pricing system.

The current prices reflected neither the value nor the supply-demand relations. The pricing deviated from the value so seriously that a tilted pricing structure developed, in which the prices of basic industries such as energy resources, electricity, transport, and raw materials and up-stream products were excessively low; whereas the prices of processing and down-stream products were excessively high. Though we carried out a series of readjustments of the irrational pricing system over the past decade, we mainly focused on the prices of agricultural and sideline products, as well as industrial articles for daily use. Due to a variety of reasons, we made little progress in reforming the prices of products made by basic industries such as energy resources, electricity, transport, and raw materials. In the wake of continuous, rapid development in the economy, the originally irrational price parity became more irrational. The prices, as well as rate of returns, of down-stream products made by general processing industries were on the rise; whereas the prices and rate of returns of products made by "bottleneck" industries, which were seriously in short supply, remained stagnant or only slightly changed. It was inevitable that an irrational structure of prices and an irrational distribution of rate of returns caused a negative effect on the investment structure. In particular, since their production was to a less extent subject to price planning, general processing enterprises and medium and small local enterprises were much more sensitive to signals about market pricing. Under the guidance of such distorted signals about pricing, various localities, departments, and enterprises vied with each other to invest large sums of funds in industries that yielded high rates of return, so that the structural contradictions of the economic growth were

intensified and economic growth as a whole became unstable. Between 1981 and 1989, the GNP of Guangdong Province grew at an annual rate of 12.5 percent; whereas its aggregate output of energy (in raw coal, crude oil, natural gas, and hydroelectricity upon conversion to standard coal) during the same period grew at annual rate of 3.79 percent, its generated energy grew by 11.4 percent, and its aggregate freight volume grew by 3.55 percent. During this period, the elasticity coefficient of energy resources was only 0.3. The lead coefficient of electricity was 0.91. The transport elasticity coefficient was 0.28 (the normal rate is 1:0.5). They were far below the rational, standard level of "1." During this period, the gross industrial output value grew at an annual rate of 18.79 percent. This included the annual growth rate of processing industries, which was 20.7 percent, and the growth rate of basic industries (mining and raw materials industry) was only 9.71 percent.

On the other hand, the supply of and demand for basic industries such as energy resources, transport, and raw materials were inelastic. If we opened their pricing to the market, we still could not stimulate a growth in their supply, or check the growth in their demand. On the contrary, we might raise the general price level. If we decided to maintain the status quo, there would be difficulties in attracting investment from society because projects of basic industries involved large-scale investment, required long-range operations, and yielded low rates of return. Since the financial strength of the state was limited, its ability fell short of its wishes to increase its investment proportion, so that the readjustment of the structure of industries was plagued by difficulties. This is an important reason for the difficulty in improving the structure of industries in recent years.

(B) Contract system: The current method of contracting intensified the dislocation of structure of industries.

The existing contracts of financial affairs and enterprise contracts are simple and practical methods of handling relations between the central and local authorities and between the state and enterprises under the existing system. They played a certain role in mobilizing the enthusiasm of localities and enterprises. However, since the relationship between the central and local authorities was not yet rationalized, the pricing structure was not yet rectified, the rights of state ownership were not yet clarified, and the enterprise mechanism was not yet perfected when the economy reached its height, both the contracts of financial affairs and enterprise contracts further encouraged localities and authorities to act one-sidedly to pursue high output value and high speed. Thus it was difficult to mitigate the structural contradictions when the economic growth rate was high. When the economy was in a depression, we continued to maintain the dislocated structure of industries, so that the progress in readjusting the structure was adversely affected.

1. The contracts of financial affairs intensified the dislocation of structure of industries. Since the clauses of most contracts of financial affairs on aggregate volume

included taxes on mobility (product tax, business tax, value-added tax), which were closely related to the output value and speed, it was natural that the local governments pursued high growth rate in order to increase their fiscal revenue. Under the encouragement of this mechanism of interests, even enterprises that yielded poor economic results would get support from local governments provided that these enterprises could yield output value and could pay the taxes. This was an important reason why we experienced difficulties in the suppression of investment scale, and in the readjustment of structure of industries, amid the current economic austerity. In terms of taxation structure, since the current tax rates on the mobility of processing industry were higher, and those on the basic industries were lower, the local governments often favored the processing industry and industries that produced general consumer goods in order to increase their fiscal revenue.

Therefore, the growth rate of the processing industry was higher. On the other hand, the enthusiasm for developing such industries was low because they involved large-scale investment as well as required long-range operations and more fiscal expenditures. Thus, the growth rate of basic industries was slow, thereby intensifying the dislocation of the structure of industries. In terms of lateral economic relations, as contracts of financial affairs strived to safeguard their local interests, the localities often adopted measures of local protectionism to increase their revenue, and excessively interfered with the outflow of local funds and materials. Their acts of consciously or unconsciously imposing local protectionism were unfavorable to regional division of labor and cooperation, as well as to the development and growth of a unified market. It was therefore very likely that construction projects were duplicated, and the regional structure of industries was assimilated.

2. The enterprise contracts intensified the dislocation of structure of industries. The major forms of enterprise contracts were to "assess the base figure, gradually increase the contracted amount, and share the excessive profits," and to "conclude contracts on two areas and establish links on one area." In order to increase its revenue and the income of its workers, an enterprise would naturally pursue high output value and high speed. Under the circumstances that there was a short supply, a high speed would further widen the gap between aggregate supply and aggregate demand, so that the structural contradiction intensified. Furthermore, the irrational structure of the current planning system and the pricing system favored the development of a particular side: The price control on down-stream products made by the general processing industry was rather relaxed since they were to a less extent subject to price planning; whereas the price control on up-stream products such as energy resources, transport, and raw materials was rather rigid since they were to a large extent subject to the price planning. These circumstances allowed enterprises producing down-stream products to be stimulated more by signals about pricing, and allowed

them to increase their investment in the production of down-stream products, so that the speed of production was quickened. On the other hand, the growth rate of investment in production of up-stream products was so small and the speed so slow that the originally inflated scale of investment further expanded under the situation where the structure was dislocated, and the dislocated structure would be worse. When the economy was in a depression, the contractual relationship made it difficult comprehensively to carry out the major means, such as merger and transfer, to readjust the inventory structure.

(C) Relations of property rights: The readjustment of structure of industries was hindered by unclear rights and duties of assets.

On readjustment of the incremental fixed assets, the current concept on the ownership of, and the right to utilize, investment was confused. Whether an investment enterprise or a competent department in charge of the examination of investment projects, they conceptually affirmed their economic responsibility for investment projects but specifically negated it. Thus, there were no explicit guidelines, investment projects were arbitrarily approved, and investment supervision was in a chaotic state. This situation thus encouraged localities, departments, and enterprises to act irrespective of their conditions, and blindly engage in investment. Even when there were mistakes in investment and losses incurred, the ultimate loser was still the state because the "big rice pot" was not yet broken, and the enterprises were actually responsible for their profits but not their losses.

On readjustment of the fixed assets and inventory, a reasonable mobility of factors of production was hindered by unclear relations of property rights and responsibility of investment, so that the assets were in a relatively static state. Consequently, it was difficult to upgrade and eliminate backward industries, enterprises that were on the brink of bankruptcy, and outdated equipment. As they lacked a new mechanism that encouraged industries to make innovations, industries that produced oversupplied goods found no way out, and industries that produced short-supplied goods found no way to boost their output. The situation of overstocking and shortage of the means of production, and that of shortage and oversupply, were very common. This situation made it difficult to readjust the structure of industries.

On technological progress, enterprises increasingly favored their short-term interests. They had no drive or pressure to make technological progress because of the unclear ownership and duty of assets and because enterprises were actually responsible for their profits but not their losses, so that they felt neither market pressure nor threat of bankruptcy. According to a recent survey, the major tendencies among the enterprises in technological progress were: First, they were enthusiastic about increasing their production capacity and expanding their scale of production, but showed no interest in adopting

advanced technology or developing new products. Second, they got used to imitating others' products and technology, and felt contented in transforming old products, processes, and designs. Third, they limited their technological progress to projects that required short-term operations and yielded quick returns. Fourth, facing a large-scale price rise of raw materials, most of them handled the situation by raising their product prices. Only some of them solved the problem by making technological progress. According to the data estimated by the Douglas production function, it was shown that between 1979 and 1989 the gross industrial output value of Guangdong Province grew at an annual rate of 17.8 percent. Its technological progress grew at an annual rate of only 3.5 percent. Its capital input-output (gross industrial output value) contribution ratio was 70.7 percent. Its contribution ratio of labor input was 10 percent; whereas its technological progress-output contribution ratio was only 19.3 percent. The above situation indicated that it was very difficult for enterprises to make any technological progress, and the readjustment of structure of industries was still at the low and inefficient level of depending on capital and labor inputs, as well as redistribution.

(D) Market mechanism: An underdeveloped market of factors of production hindered the readjustment of structure.

The implementation of current industrial policies was closely related to the roles of market mechanism. Likewise, it was necessary that the readjustment of structure of industries should be realized by relying on the market mechanism under the guidance of the industrial policies. Because of a variety of reasons, however, markets of various factors of production were underdeveloped, so that the readjustment function of market was not given full play, thereby hindering a rational readjustment of the structure of industries.

On the capital market, financial institutions were set up on the basis of administrative region under the current financial system. While the lateral relations among the financial institutions were strong, the vertical relations among them were weak. While their administrative relations were strong, their economic relations were weak. This was unfavorable to the growth of a financial market. In addition, the control over the price of capital (interest) was rather tight because the scale of credit was distributed on a regional basis. Hence, under the encouragement of the profit-making mechanism, most grassroots financial institutions preferred to grant loans to processing industries which required small investment and yielded big profits and quick returns, rather than the basic industries that involved large-scale investment, required long-range operations, and yielded low profits. Therefore, it was difficult for the current financial system to play its proper role in readjusting the incremental fixed assets.

On the market of science and technology, the basis was rather weak. The forces of scientific research were scattered around, and the work of scientific research did not dovetail with production at all. In particular, under the circumstances where technology markets were very difficult to find, there were difficulties in lateral transfer of advanced technology among trades and enterprises, so that it was difficult to replace backward technology and to absorb and develop advanced technology.

On the labor market, trade barriers imposed under the current system by urban and rural areas, by regions, by departments, and by ownership highly ossified the labor and personnel system, so that it was hard to form a labor market. Thus manpower, particularly engineering and technical personnel and intellectuals, became immobile and were relatively in a static state. This not only drained away the proper vitality for developing the production forces, but also adversely affected the readjustment of structure of industries.

(E) Macroeconomic policies: Policies and measures for readjusting the structure of industries were ineffective.

Financially, first, the current tax rates were determined by basing on the average rate of returns in the whole society and on the structure of interests formed over the years, rather than basing on the state's industrial policies. Therefore, the taxation policies could not help readjust the investment structure or the structure of industries. Second, the proportion of fiscal revenue in the national income dropped with each passing year; and the effects of using finance as a means of readjusting the macroeconomy were diminished. Third, the pattern of centralized collection of fiscal revenue was broken in recent years, but such centralized collection of fiscal revenue at central and provincial levels was not correspondingly changed. Though it was necessary for finance to support in-depth structural reforms as well as a stable development of the economy, its ability fell short of its wishes. Fourth, the proportion of non-budgetary fiscal revenue increased annually because the sources of fiscal revenue were so scattered that the financial strength was not strong enough. Even though an absolute majority of the budgetary investment was spent on the construction of basic industries such as energy resources, transport, and electricity, their scale of investment remained the same when compared to the inflated scale in society. Fifth, in the wake of diversification of the investment subject and decentralization of investment decisions caused by diversification of the investment goals, there emerged a tripartite situation in China's investment subject; that is, planned investment made by the central authority and provinces, investment made by local governments, and investment made by enterprises with self-raised funds. Furthermore, the investment goals of each were different. The central authority and provinces aimed at solving major problems such as inflation and structural dislocation, and at implementing the state's industrial policies. The local governments pursued output value and speed so as to increase their fiscal

revenue and to perfect the construction of basic facilities. The enterprises aimed at maximizing their profits and took signals of market pricing as their guideline for investment. Consequently, none of them was able to influence the readjustment of structure of industries.

Financially, when the economy reached its height, the rates of both price rises and inflation exceeded by a wide margin the interest rates on loans. Actually, such negative interest rates neither helped us effectively control the scale of investment nor helped us readjust the investment structure. Furthermore, the number of interest categories was so few that we could not check the investment inflation in the general processing industry. When the economy was in a depression the banks would, in a bid to protect their own interests, often refuse to grant loans to projects that changed the production line or that developed new products, so that it was difficult to readjust the inventory structure. In addition, the banks were, on the one hand, a functionary department responsible for macroeconomic readjustment and control; and on the other, they had the characteristics of an enterprise. It was inevitable that such dual status easily made the banks attend to one thing but lose sight of another. In particular, when grass-roots financial organizations and some banks adopted the contract system and were subject to intervention by the local governments, the banks were more than willing to support processing projects that "required short-term operations, were inexpensive, and yielded quick returns" in order to maximize their profits. To a certain extent, this weakened the functions of the banks in terms of readjustment and control.

Administratively, since the current market mechanism was imperfect, mandatory administrative orders, particularly those on suppressing the investment scale of capital construction, were practical to a certain extent but were ineffective in readjusting the structure of industries. This was because it was impractical to change the pattern of interest distribution simply by depending on administrative means. In the long run, we must depend on economic levers to readjust the structure of industries.

(F) Composition of aggregate volume: A dislocation of aggregate volume made it more difficult to readjust the structure of industries.

In the wake of an excessive increase in the aggregate volume of currency, the aggregate demand increased with each passing day, and the economic growth rate became so high that this thus became a direct cause for the dislocation of structure. First, the inflation of demand for consumption was manifested by a price rise of consumer goods, which directly stimulated a high growth rate in the consumer goods industry. On the other hand, the basic industries reacted very slowly toward changes in the prices because they were limited by their capital scale and investment cycle, thereby causing a structural dislocation. Second, the inflation of aggregate demand boosted the supply of oversupplied goods and worsened the supply of short-supplied goods.

Everyone acted earnestly to expand his scale of production and to increase his production capacity; but felt no urge or pressure to improve the composition of products or to improve the product quality. Thus, the existing dislocation of structure was aggravated. Third, the inflation of aggregate demand and the original structural contradiction brought about a chaotic pricing situation; that is, a blind growth in the consumer goods industry and basic industries further lagged behind. The situation would be highly unfavorable to the work of improving the distorted parity prices and the originally irrational investment structure, if the price rises of "down-stream products" exceeded those of "up-stream products." Therefore, to a certain extent the increasingly expanded inflation of demand concealed the contradiction of having a dislocated structure of industries. This made it more difficult to readjust the structure of industries, so that the government was forced to spend its efforts on checking the inflation of demand at the expense of long-term structural readjustment. In particular, after rectification and consolidation, most austerity policies aimed at readjusting and controlling the aggregate volume. However, there were mainly slogans in respect of the structural readjustment, and it lacked corresponding detailed rules for implementation, as well as explicit policies and measures. Thus it was basically very difficult to prevent the structural contradiction from worsening.

### III. To Eliminate Difficulties, and Form a Mechanism To Develop Structure of Industries

Proceeding from the above analysis, we can see that readjustment of the structure of industries is a long-term strategic task that cannot be accomplished in a short time. Therefore, we should mainly take step by step when readjusting the policies, measures, methods, and means concerning the structure of industries. We should avoid acting hastily or extensively, or our economic development would fluctuate sharply. From now on, the guiding ideology of our economic work should be to correctly handle the relations among speed, proportion (structure), and economic results. In economic growth, we should strive, through readjustment and control, for a balanced development of the structure of industries, and should safeguard a steady and coordinated development of the national economy. On the other hand, we must remove obstacles that hinder the readjustment of structure of industries. The key to realizing a rational and balanced structure of industries is to form and perfect a mechanism that develops the structure of industries. For this reason, we must formulate corresponding policies and measures on the basis of carrying out reforms in an in-depth manner.

(A) Carry out reforms in an in-depth manner and form a driving mechanism that develops a balanced structure of industries.

In terms of scale, the macroeconomic policies and measures on rectification and consolidation adopted in the second half of 1988 were much larger than the previous

cases of readjustment after we started our reforms. Nevertheless, there was no fundamental change in the irrationality of the structure of industries, and it remained very difficult to readjust the structure. A fundamental reason was that we did not eliminate such factors that caused the dislocation of the structure. In order to make substantial progress in readjusting the structure of industries, therefore, we must integrate it with our in-depth reforms and use reforms to solve in-depth problems relating to the dislocation of structure.

1. We should promptly carry out price reform and rectify the adverse partiality in the structure of industries. According to the state's industrial policies, we should formulate short-term and intermediate plans for price reform in the structural readjustment, and strive to improve the price level of "bottleneck" industries in three to five years, so as to make their capital-returns ratios higher than the average rate of returns of other industries. Because of dislocation of aggregate volume, imperfect market mechanism, and imperfect mechanism of macroeconomic control, however, it was impossible to further open up the pricing of short-supplied goods made by "bottleneck" industries. We should adopt gradual measures step by step to handle this issue.

2. On the basis of contracting financial affairs by localities, and under the prerequisite of further readjusting the tax rates, perfecting the tax categories, and easing the burdens on enterprises, we should adopt the approach of "separating taxes from profit delivery, repaying loans after taxation, and making contracts after taxation" among enterprises. We should gradually replace the contract system of sharing profits in the form of taxes and profit delivery by a contract system of sharing profits in the form of taxes. At the same time, we should change the method of assessing the performance of local governments, and should take the economic results and rationality of structure as the major criteria of assessment.

3. On the basis of establishing and perfecting a management system for state-owned assets, we should popularize and establish a property system for enterprises having legal person status, so that such enterprises will gradually become independent in their operations and become economic entities that assume responsibility for their profits and losses.

In addition, we should carry out corresponding reforms in the financial system, foreign trade system, and social security system.

(B) Implement correct industrial policies.

In readjusting the structure of industries, we must proceed from realities and act according to the principle of "giving priority to basic industries, supporting newly developed industries, and developing export industry." Financially, we should reduce or exempt the tax rates on the "bottleneck" basic industries in respect of energy and transport funds, as well as occupation of arable land for

construction. We should set up development funds and issue bonds for energy resources and transport; set up shareholding companies; reduce and exempt the construction tax on energy resources and transport projects funded by nonbudgetary capital, irrespective of the form of investment; reduce the rates of product tax and business tax on the "bottleneck" industries and set up special funds for production development, so as to boost the enterprises' capability of self-development; and carry out policies that allow a 20 to 30 percent depreciation rate for key industries and projects that are given support in development.

On planning and management, we should make arrangements for various plans according to the priority of industrial development. No projects, whether planned or nonplanned ones, should be exempted from the requirements of industrial policies. We should limit all asset investment within the planned scale and give priority to key industries and products that are given support in development. We should readjust the authority of investment approval. No city or county, irrespective of its size, should have authority to examine any project which is subject to limitations or prohibition; such projects should be examined and approved in a centralized manner by the province in question.

Financially, we should formulate credit policies with different interest rates according to the priority of industrial development, correspondingly offer more low-interest and discount loans, and allocate certain funds for intermediate and long-term loans. We should give priority to the need for working capital and foreign exchange by the "bottleneck" industries, and allow them to repay loans before taxation. Various banks must act according to the priority of industrial development when approving any issuance of bonds and shares, as well as internal fund-raising in enterprises.

On imports and exports, as well as the use of foreign exchange, we should readjust the credit structure according to the requirements of industrial policies; set a strict system for approving imports as well as a system of quota management; and adopt a centralized bidding system for import of mechanical and electrical products. Any use of foreign exchange must strictly follow the priority of industrial imports and exports.

(C) Establish and perfect the market of factors of production, and promote a reasonable flow of the factors of production.

We should actively develop diversified technological and economic cooperation and lateral economic combines; eliminate obstacles set up by regions, urban and rural areas, and departments in respect of ownership; promote a reasonable flow of factors of production such as capital, technology, equipment, and manpower; and promote the growth and development of capital market, technology market, and labor market. For this reason, we should formulate the following policies: On the capital market, we should gradually lift the control of capital

prices (interest rates), allow interest rates to fluctuate in the light of changes in the market price level, gradually break away from the tradition of establishing financial organizations according to administrative regions, and allow financial organizations to merge among themselves. On the technology market, we should formulate preferential policies concerning loans and taxation and encourage an integration of technology with production. On the labor market, we should gradually substitute the control of workers' wages and income, which is directly done by the government, with market readjustment (administrative undertakings should still be supervised by the government), give the right to recruit staff to enterprises, and give the right to choose one's career to workers, so as to promote a reasonable flow of and competition among qualified personnel. On readjusting the fixed assets and inventory, we should clarify the rights of property, encourage enterprises to merge among themselves, and encourage them to lease, auction, and transfer the property rights of technology, equipment, and production lines that are imported in duplication.

(D) Heighten the standard of science and technology and help industries make technological progress.

On policies toward technology, we should attach great importance to assimilating imported technology and equipment, and substituting them with home-made ones. To make technological progress, we should import advanced technology from abroad while developing our own, and take importation and assimilation as our major form. We should invite public tenders to bid for key projects which are the subject of assimilation and substitution, and encourage scientific research institutes, design institutes, and universities and colleges in different provinces to participate in the bidding. Upon assessment, we may use achievements with standards up to those of imported technology after assimilation as an import substitute. Products that are made by using 80 percent or more home-made materials may enjoy the same tax reduction and exemption intended for new products. We should reduce and exempt the customs duties on sample models (samples), software technology, key components and parts, testing instruments, and necessary imported raw materials. At the same time, we should set up special funds so as to speed up the pace of assimilation and substitution.

On planning and management, we should work out comprehensive scientific and technological development plans that help optimize and serve the structure of industries and the structure of products; that augment and perfect the current "torch plans" and "prairie-fire plans." We should clarify the details about making technological progress with respect to relevant industries; earnestly do well in the basic tasks of making technological progress; and develop new technology industries with focal points so as to heighten the scientific and technological standards as a whole.

On the technology market, by formulating laws and rules on technology transfer, as well as transactions, we should

promote an integration of scientific research with production; speed up the growth and development of the technology market; and establish a number of software services, technology development, technology transfer, and new technology applications companies that use high technology and yield good economic results, so as to improve the composition of industrial technology.

On qualified technological personnel, we should act according to the priority of industrial development and give priority to the development of, and emphatically develop, industries that cultivate technological forces, including the cultivation of engineering and technological personnel and technicians. At the same time, we should work out preferential treatment to attract qualified personnel from all places across the country. We should appropriately widen the wage gap between engineering and technological personnel as well as technicians on the one hand, and ordinary workers on the other, so as to stimulate an improvement of technology standards.

(E) Strengthen the transformation and reorganization of industrial organizations.

We should try our best to transform and reorganize industrial organizations by using economic means. According to international practice, we should take famous, top-quality, and well-known products, as well as core enterprises with powerful economic strength, as the lead to actively carry out a division of labor and cooperation, so as to eliminate the omnipotent "large and complete" and "small and complete" situation. By acting according to the economic rules, we should establish transregional, multitrade enterprise groups; carry out comprehensive lateral combines and mergers among enterprises; and promote a reasonable flow of the factors of production, as well as readjustment of assets-inventory structure. The purpose of doing so is to solve problems that enterprises are currently poor in both centralizing and diversifying their production, that their production capacities are lying idle, and that their economic results are unsatisfactory; and to promote an intensive development in industrial organizations.

In order to promote the transformation and reorganization of industrial organizations, we should work out preferential and restrictive policies concerning fiscal revenue, taxation, finance, and credit so as to guide and help enterprises carry out specialized division of labor and cooperation; to help them gradually change from "closed omnipotent" ones into "open cooperative" ones; and to promote an optimized combination of industrial organizations.

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[Article by Yang Rupeng (2799 1172 7719): "Reliance on Scientific, Technological Progress: Key to Invigorating Enterprises—Survey of Wuhan City's Jianmin Pharmaceutical Factory"]

[Text] Wuhan City's Jianmin Pharmaceutical Factory (also known as the Yekaitai Pharmaceutical Factory) was

formerly the Yekaitai Ginseng Medicine Shop, established under the reign of Chongzhen of the Ming Dynasty, and now has a history of some 360 years. Since the Qing Dynasty, together with Beijing's Tongren Shop, Hangzhou's Qingyu Shop, and Guangzhou's Chenliji, it has been known as one of the four largest pharmaceutical factories in the whole country. At present, it has a staff of over 1,100 workers and produces 14 large types and over 180 medium types of pharmaceuticals. In recent years, this factory, concurrently with vigorously grasping the construction of socialist spiritual civilization, has firmly insisted on putting scientific and technological progress in first position in the enterprise's economic development strategy and pushing forward a large-scale rise in economic and social effects. Since 1986, its output value, sales receipts, and realized profits and taxes have respectively achieved yearly progressive increases of 14.73 percent, 17.95 percent, and 14.87 percent, fulfilling 400 days early the target fixed in the four-year contracted operation agreement. Its economic effects have been in the front rank of those in the same trade in the whole country; the yearly output value per worker has increased from 18,800 yuan to 48,000 yuan; the yearly profit and tax per worker has likewise increased from 2,800 yuan to 6,200 yuan; and the annual output value has increased from 20.70 million yuan to 53 million yuan. A number of new products for various uses have separately received commendations from the state, ministry, province and city. Each year it has been commended as an advanced enterprise of Wuhan City and of Hebei Province and also as the country's major enterprise in pharmaceutical production. Recently the State Planning Commission has sanctioned the factory's construction into the national production center for medicines for infants during the Eighth Five-Year Plan period. Early this year the factory attended the national conference on exchange and raising of enterprises' economic effects, convened by the State Council's Production Commission and the National Industry and Commerce Union, and exchanged its experiences with other participants. How does this medium-sized old enterprise rely on scientific and technological progress for invigoration? Its principal experiences are as follows:

#### **Firmly Establishing the Ideology of Reliance on Scientific and Technological Progress**

Prior to the middle period of the 1980's, this factory had antiquated equipment, aging technology and low management efficiency. At that time, the state enforced the unified purchase and sale of medium-grade pharmaceuticals, and since the factory's products had historically enjoyed a reputation, there was no question at all regarding sales of its products in the domestic market, while it also received a welcome in foreign markets. The State Economic Commission awarded the factory the honorary title of "major export enterprise of the whole country." Although the factory leadership mentioned a few points on the importance of scientific and technological progress, the sense of urgency was lacking, the actions taken were slow and certain comrades even said: "It does not matter whether scientific and technological progress is pursued or not; the factory has increased its production and sales just the same."

After 1985, the market situation underwent a drastic change and the state abolished its unified purchase and sale of medium-grade pharmaceuticals; while village-run small pharmaceutical factories rapidly increased in number and fought with state-run pharmaceutical factories for raw materials, for products and for markets. The international markets also fixed rigid standards governing the quality of medium quality products exported by China. Under such conditions, the factory continued production as usual, as a result of which there was a large-scale stockpiling of products, for the first time in history the factory reported a deficit, and its foreign exchange earnings from exports also showed a declining trend.

"On what can we rely on to get out of the dilemma and invigorate the 'Jianmin'?" The leadership took this as the topic for starting a round of study and discussion. First, earnestly study the central authorities' directives on the important nature of scientific and technological progress issued since the Third Plenary Session of the 11th CPC Central Committee. It is necessary to understand that attaching importance to scientific and technological progress is the important guiding ideology and strategic guideline repeatedly asserted by the central authorities in the new era; it is needed to ensure sustained and stable development in economic construction and needed to establish an externally oriented economy and to accept the challenge of the world's new technical revolution, and it is necessary to sweep aside the traditional concept of neglecting scientific and technological progress and relying on expanded reproduction through extension. Second, analyze the causes of the great triumphs scored on the economic front since reform and opening to the outside world. Everybody has deeply felt that scientific and technological progress is the most important factor in the development of modern productive forces and has become the source of the continued elevation of economic effects and social benefits. While Chinese medicated drugs are one of China's strong selling points and special features, in the international market they have met with strong challenges and the basic way out is to raise the scientific and technological level of their production. Third, learn from comparison that scientific and technological progress is the essential road to enterprise invigoration. After the state's issuance of the directive on the specified sanitary quality standard for China-made pharmaceuticals, the then factory director, who had been a chief engineer, knew the difficulties but still pressed forward. He copied from the new methods in killing bacteria both at home and abroad and created a new technique of sterilization in Chinese medicine and made the quality of the products exceed the state's required standard. Scores of enterprises in the same trade have learned and adopted this method and obtained good results. They checked and compared this experience with the enterprise deficit and this made all the firmer their decision on and confidence in reliance on scientific and technological progress. In the meantime, through such propaganda tools as meetings, broadcasting, television, blackboard reports and so forth they

led the staff members and workers of their whole plant to increase their understanding of science and technology and to throw themselves into the activities of invigorating the enterprises by means of science and technology.

Actual practice has convinced them that scientific and technological progress is a systematic and comprehensive concept. It includes the progress and application of scientific and technological theoretical study; raising the development capacity of science and technology; improving the techniques, equipment, materials, methods and products; progress in the operation and management system and in its efficiency; development of the measures and level of servicing; elevation of the scientific and technological caliber of the workers; and so forth. Grasping such links as renovation of management and technology and development of intelligence in concretely implementing the strategic ideas of relying on scientific and technological progress, they have achieved actual results.

#### Seeking Efficiency From Scientific Management

Scientific management can effectively organize and coordinate the enterprise's various kinds of work, display to the maximum degree the capabilities of man, money and goods and make them attain the highest efficiency rate.

Jianmin Pharmaceutical Factory has taken the strengthening of management as a major factor in achieving scientific and technological progress and striven hard to acquire a scientific nature, systematization, modernization, regularization and standardization.

1. Enforcing scientific and democratic policymaking. The factory has striven hard to make all strategic policymaking affecting the situation as a whole or in part scientific and democratic. For example, on the question of developing new products, relevant persons inside the factory, on the basis of forecasting and investigating hospitals, scientific research units and patients, through the Chinese medicine markets both inside and outside the country, formulated three sets of programs. The first advocated developing principally high-grade nutritive medicines because this category of products did not require high technology but could within a short time produce relatively high economic effects. The second advocated the concentration of efforts on developing new clinical medicine, because although this would demand high technology and involve a long period of time, it would be most needed for the sake of the health welfare of the state and the populace. The third advocated that concurrently with the major development of new clinical medicines, importance also be attached to the production of medicines of high nutritive value. The factory leadership did not make a hasty decision or attempt to arrive at a conclusion blindly. Rather, they separately convened group discussion meetings, policy-raising meetings and so forth for the technicians, cadres and workers and listened thoroughly to the views and

propositions from various sides. The pros and cons of the three programs were thoroughly discussed, evaluated and compared. All agreed that Chinese medicated drugs were special commodities closely related to the health and well-being of the people, and that Chinese medicine enterprises should not take profit-making as the principal object but should put social effects in first place. Attaching major importance to developing new clinical medicines would be helpful to firmly insisting on the socialist direction of the enterprise and achieve the growth of both economic effects and social effects at the same pace. At the same time, the enterprise's profits could make more contributions to the state. Hence concurrent attention should be paid to the production of high-grade nutritive pharmaceuticals of high economic effects. Finally the factory leadership decided on the third policy program and loudly advocated the slogan of "scientifically and technologically invigorating the factory and revamping Chinese medicine." Actual practice has shown that this policy was an improvement and in conformity with actuality. Over the past four years, in all their important policy decisions they have rigidly adhered to a scientific and democratic procedure, thus avoiding errors.

2. Establishing and perfecting the enterprise contracted operation responsibility system. In 1987 the factory adopted this system and since then, for the sake of avoiding short-term ideologies and short-term behavior, it has taken scientific and technological progress as an important target and basis for appraisal in this contracted responsibility system. In the coordinated reform inside the enterprise, the various departments and workshops have separately carried out the operation contracted responsibility system flexibly and in various forms. At the same time, the employees representatives congress system and various kinds of reward and punishment system have been inaugurated, the staff members' and workers' representatives and the factory leadership have jointly taken up the contracted operational tasks, and the party committee has done the supervision and guarantee work. The powers, responsibilities, and interests of the cadres and staff members and workers have been clearly divided and all have worked in harmony to contribute their efforts to the enterprise's development.

3. Establishing and perfecting the scientific and technological organizational and management system with the chief engineer having responsibility under the factory director's leadership. It was determined that the factory director and an assistant director should principally grasp the management work of the scientific and technological structure, that the chief engineer should have both responsibility and power, and that the four technological departments (technical section, appraisal and inspection section, equipment section, and materials office) and the factory's scientific research institute should all be replenished and augmented. Over the past few years, a large volume of work has been done on various aspects such as opening up new products, technical transformation, introduction of technology and

talented personnel, training of cadres, staff members and workers, and organizing the enforcement of scientific and technological rules and regulations. This has changed the situation of there being people assigned to take charge of scientific and technological work but in reality nobody doing any work.

4. Ensuring a sufficient input into science and technology. The factory has firmly insisted that each year the investment in science and technology be higher than the investment in other sectors of the enterprise. Since 1987, under the conditions of a rise in prices of raw materials and a shortage of funds, the gross input into science and technology has amounted to 6,093,300 yuan, equivalent to 150 percent of the amount in the preceding 23 years. Not long ago, it was decided to use the 2 million yuan accumulated in the last two years on input into science and technology, of which 1 million yuan would be directly used on introduction of the new results of the first-rate Chinese medicated drugs for infants which had received the state's certificate for new medicine or which had completed preclinical tests.

5. Establishing and perfecting the sales and service management system. This is an important aspect of the work to make the products marketable and able to open up and hold markets. Their method is: Setting up a contracted operation management system suited to the sales structure, consolidating the sales markets in 10 large cities and towns in the country, and, counting on the second-level clinical and medical stations principally, endeavoring to make the supply of products neither too much nor dislocated. They also actively sponsor or take part in sales exhibitions, order-placement meetings, and news propagation meetings to expand advertising and propaganda in public relations, and develop many kinds of public welfare activities such as contributing clothing and medicines to orphans so as to make people know more about the enterprise and its products. They have also strengthened the collection and handling of market news and information, established service stations for client households and performed a good job in providing pre-sale and after-sale services. Many household clients and foreign merchants have made the following comment: Jianmin Pharmaceutical Factory has truly accomplished the objective of clients first and patients first.

6. Establishing and perfecting the enterprise technical supervisory system. This system takes technical standards as the main body and takes as its contents the products' quality standard, quantity standard, work standard and management standard. It is equipped with electronic computers, measurement tools and testing appliances, basically manifesting modernization and standardization. Take, for example, the quality standard of products: Production is rigidly carried out according to the various standards prescribed by the state and the factory's internal control standards, major products are subjected to fixed-quality and fixed-quantity analyses, in the production process the quantitative and qualitative analysis of semifinished products has been strengthened,

and the qualitative and quantitative standards of the original complementary materials and packaging materials have been perfected. Quality inspectors of workshops make daily reports to the examination and inspection section, the latter files daily quality and quantity reports, the factory each month convenes a quality and quantity analysis meeting and all problems are settled the same day they appear, thus protecting the quality of the products.

At present, this factory's principal economic targets are up to the state's second-grade standard. Compared with before 1986, its labor productivity rate has risen by 144.67 percent and the savings and increase in effects brought along by scientific control have accumulated to over 3,165,700 yuan.

#### **Undertaking Great Technical Renovation and Improving Product Quality**

Several years ago, like the majority of Chinese medicine enterprises in the country, this factory's equipment was antiquated, and was mainly composed of such traditional handicraft tools as stone grinders, rolling grinders, big jars, pots and pans and such semimechanized processing equipment as steam-boilers and electrical machines of the 1950's. There was only one set of domestically manufactured inspection and testing equipment of the 1970's. The technological level was low and reliance was principally placed on such traditional methods as dipping into water, baking, frying, boiling and so forth. Management was entirely of the handicraft type, and hence production costs were high, scientific and technological involvement was low, effects were low and there was a general lack of competitive power. However, by means of technical renovation, they have continuously developed and produced new products, greatly improved product quality and revitalized the factory.

Introduction of new technology. Beginning from 1987, the factory has invested over 5 million yuan in the purchase of over 70 sets of new equipment for use on the production line and in packaging, including equipment from the United States, Japan, and elsewhere in the country. Its introduction of technology is not solely for the purpose of expanding production capacity, but also to create something new from a high starting point and increase its capacity to develop itself. Hence, it insisted on accomplishing the following: First, the introduction of technology should only be complementary, whereas the strengthening of independent scientific research and development of technology should be the chief objective and the digestion and absorption of the introduced technology and making new creations should constitute the important contents. For example, in the introduction of the disk-shape separator generally used in ships, they transformed it into an appliance which could separate medicine fluid from medicine residue, thus greatly saving energy and manpower and increasing the efficiency rate by over 20 times. Second, preference was

given to the introduction of adequate advanced technology which could help in raising the quality of the products and increase foreign exchange earnings. Third, concurrently with the introduction of equipment the corresponding software technology was also introduced so as to grasp as soon as possible the technology's secrets. Fourth, joining together with contemporary factories, scientific research units and higher institutions of learning in work of technology digesting, absorbing and creating, and attempting to gradually form advanced technology with the enterprise's special characteristics.

Carrying out all-round technical transformation of the traditional industrial structure. Through developing technical transformation activities of a popular nature, the mechanization and automation of equipment and technology was gradually realized. A large modernized manufacturing building was built, and the workshops and factory building were transformed and rebuilt. The traditional method of preparing medicinal liquor was soaking and immersion in scores of big jars, and in a month's time 10,000 to 20,000 bottles of medicinal liquor could be produced. It created and applied a new method which greatly reduced the time required for soaking and immersion and thus doubled the production volume. In the past five years, the whole factory has carried out over 100 projects of technical renovation and transformation, greatly raised the level of methods, equipment, and technology, improved labor conditions and ensured and protected the quality of the products.

Continuously studying, making and developing new products. In formulating the new products development plan, the factory followed the procedure of first forming the production's first generation, studying the formulation of the second generation, planning the third generation and making proposals for the fourth generation. Several years ago, through social investigation, they discovered that in China the rate of rickets among children was as high as 40.1 percent and that the disease was also very prevalent abroad, while the calcium tablets customarily used by the clinics and the cod liver oil of Western medicine either produced poisonous side-effects or did not produce good treatment results. The factory concentrated its scientific and technological strong points and cooperated with three hospitals in Wuhan specializing in treating children's diseases to attack the problem and finally succeeded in producing a new medicine which had no poisonous side-effects and was noted for its effective treatment of rickets in children. The name of the new medicine was "long-mu-gu-chongji." After using this new medicine, both Chinese and foreign doctors and family heads of patients accorded it a great welcome. It was sold far and wide both within the country and in scores of countries abroad. Subsequently they invested over 1 million yuan in the second-stage scientific study of the medicine and now it has reached the state's first-rate quality standard and has been listed as one of the seven Chinese medicated drugs enjoying large sales in the country and as one of the four new products in scientific research in the

whole country showing the best and most effective treatment effects of Chinese medicated drugs during the Seventh Five-Year Plan period. More recently, the factory has begun its third-stage scientific research on the medicine and proceeded with the proposals for its fourth generation series of products. Since 1986 the factory has developed 18 new products, and the newly increased output value has accumulated to over 100 million yuan. These new products are in the forefront in science and technology, their quality is good and hence this has ensured their favorable position in competition.

Introducing advanced scientific and technological results and rapidly turning them into productive forces. A certain large hospital in Wuhan had for over 10 years used a certain syrup for treatment of throat inflammation. It received commendation from the Hubei provincial authorities but all along could not have it further developed. The factory boldly took up these fruitful results and redeveloped it into the Jianmin throat tablet. It soon found its way into hundreds and thousands of hospitals and pharmacies and even went into the international market.

#### Striving Hard To Improve the Cultural and Technical Caliber of the Staff Members and Workers

Basically, economic competition among enterprises is competition in science and technology and is determined by the improvement in the quality and caliber of the workers and the number of specialized and talented personnel. In the aspects of knowledge development and personnel training, Jianmin Pharmaceutical Factory has done much down-to-earth work.

Before 1986, this factory had only 66 technicians. This was only 5 percent of the whole staff. In order to build up a wholly specialized, rationally organized and highly technical scientific and technological contingent, the factory first increased the investment in knowledge and successively put over 77,000 yuan into training and educational funds. Second, the number of scientific and technical personnel was increased and it took in 47 graduates from colleges and specialized institutes. Third, attention was paid to the technicians' continued education and updating of knowledge: Concurrently with organizing the staff in firmly insisting on learning political theory, through various channels and methods such as sending staff members to party schools, colleges and specialized medical schools, and large hospitals for learning and advanced studies; inviting medical specialists to give lectures; participating in specialized conferences and taking up tasks of finding solutions to difficult problems, the ideological and theoretical levels and business ability of the staff members were raised. At present, the factory's personnel include 130, or about 15.2 percent, who have acquired the cultural level of graduates of colleges and senior high schools, and 114 with specialized technical professional standing, constituting 12.8 percent of the total number. Of the latter, 26 are of middle-grade professional standing and five of senior-grade standing. Their specialities include Chinese

medicine, Western medicine, economics, foreign languages, management, Chinese language, automation, and financial statistics. This scientific and technological contingent has become the main and leading force in the factory's scientific and technological progress.

Concurrently with grasping the formation of this scientific and technological contingent, the factory has been deeply interested in bringing up the cultural and technological quality and caliber of the entire staff. The various teams and subgroups subscribe to the party paper and the party subgroup subscribes to the party magazine QIUSHI. Staff members have been regularly subjected to education in current affairs, policies, political ideology and general law. Young workers below 35 who have been absent from production or work for a whole week have to undergo education on the party's basic line and on the basic national conditions so as to firm and strengthen staff members' faith in socialism. In order to raise the technical quality of the heads of teams and subgroups, the factory has conducted over 50 training sessions for heads who had been absent from production and work, giving them lessons and training on economics, technology, labor, and methods. The whole factory has developed activities in "creating qualified teams and subgroups, advanced teams and subgroups and red-flag teams and subgroups." These activities are incorporated into the contents of assessment and appraisal of the economic responsibility system. In addition, all-round quality and quantity management and control activities with the teams and subgroups as units have been conducted. Over 90 percent of the whole factory's staff members and workers have taken part in the national unified examination on knowledge in quality and quantity management and their pass rate was 100 percent. From top to bottom in the whole factory, a good atmosphere has been formed of the conscious study of theory and of technology and many workers have grasped many and different kinds of production techniques and have shown an obvious improvement in their quality and caliber.

## PROVINCIAL

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#### Foreword

The 10-Year National Economic and Social Development Plan (1991-2000) and the Eighth Five-Year Plan (1991-1995) for Tianjin Municipality have been drawn up in the spirit of the CPC Central Committee's "Proposals on the Formulation of the 10-Year National Economic and Social Development Plan and the Eighth Five-Year Plan" and the "10-Year National Economic and Social Development Plan and the Eighth Five-Year Plan" passed by the fourth session of the Seventh NPC and in light of the actual conditions in Tianjin. Because of the uncertainty in the next decade, including the duration of the Eighth Five-Year Plan, the tasks and targets put forward in the plans must be modified or amplified as necessary in the course of implementation in accordance with the actual circumstances. Their implementation, too, must be effected through the annual plan.

The decade between 1991 and 2000 will be a critical time in China's socialist modernization as well as an extremely important period in the construction and vitalization of Tianjin. It is imperative that the 10-Year National Economic and Social Development Plan and the Eighth Five-Year Plan be formulated and implemented properly.

In the 1980's, the municipality earnestly followed the party's basic line of taking economic construction as the central link and adhering to the four cardinal principles, and to reform, and to the open policy, together with a string of policies and principles. In the course of implementation, Tianjin has tentatively developed a work philosophy with its own characteristics and created a whole new look in modernization, paving the way for further developments in the national economy and society.

The national economy developed in a steady and sustained manner, with an appreciable increase in economic strength. In 1990, Tianjin's GNP hit 30 billion yuan and

the national income was 24.3 billion yuan, an increase of 96 and 84 percent respectively over 1980 in constant prices, or 7 percent and 6.3 percent annually on the average. The gross value of industrial and agricultural output reached 76.94 billion yuan, a 1.6-fold increase in constant prices, or 10.2 percent annually on the average. (Calculated using constant prices of 1990. It would have been 54.15 billion yuan in 1980 constant prices.) Throughout the municipality, per capita output rose from 1,392 yuan to 3,493 yuan.

The industrial structure and product mix have been preliminarily adjusted, and social and economic development have been coordinated better. After two extensive rounds of adjustment and transformation in the industrial structure, economies of scale have been achieved in a host of products and a new batch of new leading products has been developed. In 1990, the GVIO [gross value of industrial output] amounted to 71.73 billion yuan (51.82 billion yuan in 1980 constant prices), a 1.6-fold increase over 1980 in constant prices. In the countryside, the rural economy is developing across the board. The beginnings of a suburban economy featuring balanced industrial and agricultural growth are now in place. Grain output reached 1.888 billion kilograms in 1990, up from 1.378 billion kilograms in 1980. Basic self-sufficiency has been achieved in vegetables, eggs, milk, and fish. Township and town enterprises accounted for over one-quarter of the municipality's GVIO. In commerce, transactions, both buying and selling are on the rise, and the market is booming. Commodity prices are largely stable. In 1990, social commodity retail sales amounted to 14.94 billion yuan, up 1.1-fold over 1980 after adjusting for inflation. Progress has been made in science, education, culture, public health, and sports. Over the past decade, there were a total of over 4,500 major S&T achievements, almost 20,000 new industrial products were trial-manufactured, including 13,000 that were put into production, and 309,000 mid-level people were trained in a variety of specialties. With economic, scientific and technical, and social undertakings stimulating one another, Tianjin is moving forward in the direction of balanced growth.

Economic and technical exchanges with the outside world have been increasing constantly. The export-oriented economy is striding ahead at a new pace. In 1990, Tianjin exports amounted to \$1,786,000,000, a historic high. During the past decade, Tianjin earned \$14.7 billion in foreign exchange, 1.1 times that of the total for the preceding 3 decades, and actually utilized \$1.73 billion in foreign capital, including \$350 million in direct foreign capital. A total of 236 enterprises funded by the "three capital sources" were opened for business. In the Economic and Technical Development Zone, a 3-square kilometer industrial zone was built together with a 1.2-square kilometer residential area. In 1990, its industrial output value amounted to 780 million yuan and a foreign business investment service center was established. With the completion of a host of service

facilities geared to foreign businessmen and the commercial tax protected warehouse, the investment climate has been greatly improved. The municipality is now open at three levels—the development zone, municipality proper, and the suburbs.

Urban infrastructural facilities have improved and the urban landscape has changed enormously. Post-earthquake reconstruction was completed, as was the project to divert water from Yi He into Tianjin. Urban renewal and construction went under way. Electric power installed capacity increased 677,000 kilowatts to reach 2.04 million kilowatts by 1990. The port was enlarged. The network of railroads was overhauled. Expressways were built. The airport was enlarged. The result is a transportation system centered on the port but combining land, sea, and air transport. In posts and telecommunications, Tianjin boasts a network of transmission involving the municipal telephone, long-distance communications, microwave communications, and satellite communications. Throughout the municipality, the capacity for telephone exchanges increased from 178,000 to 227,000 lines. As for transportation within the municipality, a road system based on the three circular routes and 14 radiating routes was completed. A sewage treatment plant was built, roads were constructed, and more trees were planted. The urban landscape has changed remarkably, with a significant increase in transport capacity.

There has been a notable rise in living standards and living conditions have gotten much better. In 1990, per capita income among urban residents was a high 1,522 yuan, up 67 percent over 1980 after adjusting for inflation, or 5.3 percent annually on the average. Per capita net income among peasants was 1,069 yuan, up 97.5 percent over 1980 after adjusting for inflation, or 7 percent annually on the average. In 1990, savings by urban and rural residents amounted to 12.69 billion yuan, a 14.9-fold increase. In urban areas, per capita living space rose from 3.6 square meters to 6.7 square meters. Gas was available to 80.4 percent of the population for domestic consumption, up from 31.2 percent, and 11.9 percent of the houses in the six districts in the municipality as well as Tanggu, Hangu, and Dagang were heated.

Economic structural reform was undertaken across the board and economic operating mechanisms began to change. Rural reform has been remarkably successful, powerfully mobilizing the production initiative of the peasants. Commodity production grew by leaps and bounds. The commercialization of agriculture rose from 60.8 percent to 70 percent. Revolving around the central link of enterprise vitalization, the municipality has introduced the contract responsibility system in all forms and shapes and reformed the planning, finance, tax, banking, materials, commerce, foreign trade, price, workers' wages, and other systems as appropriate, increased the decision-making authority of enterprises, and expedited the development of the commodity economy. In science and technology, education, urban construction, urban

administration, and port management, reforms have also been strikingly successful. While upholding the dominant position of public ownership, a variety of joint economic organizations, enterprises of the three sources of capital, the private economy, and the individual economy have all made fresh progress, thereby contributing considerably to Tianjin's economic resurgence. Changes in the economic system overall have been tremendous.

The development of a spiritual civilization has achieved notable success. A long-term, thorough campaign to educate people to adhere steadfastly to the four cardinal principles and oppose bourgeois liberalization has been carried out. The masses and cadres have solidified their faith in socialism. Ideological and political work has been intensified, as has the drive for government honesty, democracy, and the rule of law. Society has become more stable and unified. Profound changes have occurred in the people's spiritual outlook. Significant developments have also occurred in literature and the arts, in journalism, publishing, radio, television, and the social sciences.

Reviewing Tianjin's social and economic developments in the past decade, we see that the first five years emphasized the development of light and textile industries. Market supplies were increased, jobs were found for people waiting for employment for years, post-earthquake recovery was accomplished, and water resources were found for urban residents. The gross imbalance in the "flesh and blood" relations was notably corrected. On the basis of these accomplishments, Tianjin spent the last five years expanding the scale of the economy and raising its level of technology. "Food basket" projects were launched and the people's lives were enriched. The construction of urban infrastructural facilities was stepped up. The investment climate and living conditions were both improved, giving Tianjin the beginnings of a clean and beautiful modern municipality. Since the second half of 1988, Tianjin has unwaveringly implementing the CPC Central Committee's decision to further improve the economic climate, rectify the economic order, and deepen reform. The economic rectification drive has been successful. The entire economy is headed in the direction of stable, coordinated growth.

However, some problems do lie ahead. Essentially the industrial structure is not sound enough. Basic raw materials industries are relatively weak. The technology and equipment of processing industries are becoming obsolete. There are comparatively few mainstay industries and leading products in which economies of scale have been achieved, resulting in a lack of staying power. The development of the tertiary sector has been too slow. Tianjin has yet to live up to its full potential as an urban center. The massive transfer of enterprise profits, obstructions in economic circulation, low profitability—all this has not basically changed. Government revenues have been declining while subsidies have remained at a

stubbornly high level, severely hampering the development of the economy and other undertakings. Enterprises, particularly large- and medium-sized enterprises owned by the state, have a limited capacity for self-development. The new economic operating mechanism is not yet fully in place. We must redouble our effort to further liberate our thinking, expedite the transition to a planned commodity economy, improve quality, tighten management, and emphasize and improve efficiency. In addition, there are many other contradictions in social development that require close attention and must be resolved.

### I. Objectives of Struggle, Guiding Principles, and Major Tasks

#### 1) Objectives of Struggle and Guiding Principles

In accordance with the strategic goals of phase two of China's socialist modernization and the demands that the nation makes on Tianjin, the overall objectives of our struggle in the next decade are to quadruple gross output value over 1980 in constant prices by the end of the century; achieve a moderately comfortable standard of living overall and continue to strive to reach higher levels; build up Tianjin within 10 years or more into a technologically-advanced, comprehensive industrial base with an open, multi-functional economy, and a modern port, and create a corresponding economic system and socialist spiritual civilization, and thereby raise the caliber of the economy as a whole to a new level. We should vitalize Tianjin, save the rest of the nation, enter the world, set the stage for further development in the next century, and contribute even more to China's socialist modernization.

To achieve the above objectives of our struggle, we must continue to adhere to the party's basic line of one center, two basic points; uphold the 12 major principles on developing socialism with Chinese characteristics put forward in the "Proposals" of the Seventh Plenum of the 13th CPC Central Committee; adhere steadfastly to Tianjin's basic, long-term work philosophy: Do everything for the people and rely on the people in everything; persevere in development and reform within the broad framework of stabilizing the overall situation. In light of reality, we should concentrate on the following specific guiding principles:

—We should firmly make Tianjin fulfill its role as an economic center. That should be the top priority. We should make the most of Tianjin as a coastal core city where production, circulation, and services all come together, and where foreigners and the interior are linked. We should increase Tianjin's appeal and enhance its capability to disseminate goods and technology to the interior.

—We should follow closely the objective of developing an export-oriented economy. The development strategy should take the export sector as the leading sector, use it to fuel the development of the domestic sector, and combine the two. The export-oriented

economy should lead in the improvement of the standards of production, science and technology, and management.

—We should deepen economic structural reform, combine reform with development and the policy of opening up to the outside world, and speed up the pace of reform. We should create the rudiments of a new economic system, create a socialist planned commodity economy, and an economic operating mechanism that combines economic planning with market regulation.

—We need to steadfastly make economic results the objective, and view the improvement of economic results as the central link of all economic work. We should work hard to find a way to produce high-quality products with high added value, and find a way to minimize inputs and maximize outputs. We should expedite the sustained, steady, and coordinated development of the national economy.

—We should rely on scientific and technical progress and the training of qualified personnel, and base economic construction primarily on the improvement of the level of technology, the standard of management, and the caliber of the work force. The material input-led economy should gradually give way to an S&T progress-led economy.

—We should make full use of the comprehensive strengths of Tianjin, which is superior geographically and well endowed with resources. It has a relatively solid economic base and a high level of technology. The municipality should gradually create an economic structure with its own characteristics by putting these advantages to work.

—We should firmly liberate our thinking, change our ideas, break new ground, and forge ahead. Amid reform and construction, we should have the courage to innovate, break new ground, and take risks. We should never stop looking for new ideas and methods, and adopt all kinds of methods to suit the development of a planned commodity economy.

—We need to keep up the spirit of struggling arduously and developing the country through thrift and diligence, provide for production growth and the people's livelihood, and practice thrift and industry in everything we do. Taking the municipality's financial and material capabilities as a starting point, we should plan comprehensively, give everything due consideration, but emphasize what is important.

—We should tackle the development of the material and spiritual civilization at the same time, set our sights on improving the caliber of the people of the entire municipality, and tackle the development of the material civilization and the spiritual civilization together. Each should help the other develop in a coordinated way.

## 2) Major Tasks

Based on the above objectives of our struggle and guiding principles, economic development in the coming decade generally consists of two stages. In the first year of the Eighth Five-Year Plan and perhaps even longer, we will continue to improve the economic climate and rectify the economic order, and develop the economy through economic rectification. Subsequently we must continue to complete some of the tasks left unfinished by the economic rectification drive. We must continue to further reform, straighten out relations, adjust the structure, improve profitability, and ease the more severe problems in order to bring about continuous, sound economic growth. We need to intensify the technical transformation of old enterprises, zero in on a number of major projects that will increase the staying power of the economy in order to build up a reserve of strength for development in the Ninth Five-Year Plan. Starting from this basis, we should further reform the economic structure during the Ninth Five-Year Plan, adjust the industrial product mix even more thoroughly, and continue to improve economic results in an all-out push for progress on all fronts. The pace of development should be a little slower in the Eighth Five-Year Plan and a little faster in the Ninth Five-Year Plan.

The major tasks in the various areas are:

- a) To go all out to improve economic results, optimize the economic structure, improve the overall quality of the national economy, and quadruple the GNP in 1980 constant prices by the end of the century.
- b) To mount an export drive, utilize foreign capital energetically and effectively, and further open up Tianjin to the world at three levels—the development zone and the port, the municipality proper, and the suburbs. We should increase economic and technical exchanges with the outside world and raise openness to a new level.
- c) We should work hard to adjust the economic structure. Even as we make steady progress in the primary and secondary industries, we should quicken the pace of development of the tertiary sector, particularly that of finance, insurance, commerce, materials, transportation, posts and telecommunications, information, tourism, and real estate. We should fully utilize Tianjin as an industrial and commercial city and an economic center and make it more attractive and better able to distribute goods and services to the interior, and serve as a goods collection and distribution center.
- d) We should make the most of what we already have but also do everything to tap potential. We should overhaul and transform existing enterprises, particularly large- and medium-sized enterprises, and make Tianjin products more versatile and competitive on the international market. At the same time, we should make the most of Tianjin's strengths, namely its ample resources and formidable technical base, and set aside the necessary financial and material resources to develop industries that produce raw materials badly needed in production. We should rely on progress in S&T to accelerate the development of industries and products of new and high technologies.
- e) We should press ahead with the specialization, commercialization, and modernization of the rural economy and expedite the all-round development of agriculture, forestry, animal husbandry, sideline production, fishery, and township and town enterprises in the direction of fashioning an export-oriented economy in accordance with the principle of "serving the municipality and enriching the peasants" as well as meeting the demands of urban-rural integration.
- f) We need to continue to develop energy, transportation, communications, utilities, and other urban infrastructural facilities, and further improve the investment climate and enhance the municipality's carrying capability.
- g) We should further adjust and optimize the educational structure, improve the quality of education and the efficiency with which schools are operated, develop education to nurture more qualified personnel for economic and social development, mobilize resources to get a handle on a number of key scientific research projects, and disseminate and apply new technology. We need to intensify basic scientific research, and transform S&T achievements into productive forces without delay.
- h) We should increase output, further improve the people's living standards, practice family planning, stringently curb population growth, and vigorously develop all sorts of social undertakings.
- i) We need to continue to deepen economic structural reform, invigorate enterprises, particularly large- and medium-sized enterprises owned by the whole people, in accordance with the central plan of the state and the demands of developing an export-oriented economy. We should nurture and develop a market system, correspondingly reform the macroeconomic regulatory and control system, and put together a new economic system and operating mechanism that meets national needs as well as the reality in Tianjin.
- j) We should advance socialist ideology and socialist morality, expedite the development of the socialist scientific culture, perfect socialist democracy and the socialist legal system, and bring the development of the socialist spiritual civilization to a new level.

## 3) Leading Economic and Social Development Indicators

- a) We should raise the GNP to 61.4 billion yuan in 1990 constant prices by the year 2000, a 1.04-fold increase in a decade, or a 7.4 percent annual increase on the average. The average annual gain will be 6.5 percent in the Eighth Five-Year Plan and 8.4 percent in the Ninth Five-Year Plan. Per capita GNP should increase from 3,493 yuan in 1990 to 6,330 yuan in 2000. The tertiary sector will grow an annual average of 11 percent during the decade,

specifically 10 percent annually during the Eighth Five-Year Plan and 12 percent annually during the Ninth Five-Year Plan. The tertiary sector will account for 32 percent of GNP by the end of the Eighth Five-Year Plan and 38 percent, almost 40 percent of GNP, by the end of the Ninth Five-Year Plan, up from 27.3 percent in 1990.

b) The GVIAO [gross value of industrial and agricultural output] should increase to 147.7 billion yuan by the year 2000, up 6.5 percent annually on the average, including a 6 percent average annual gain in the Eighth Five-Year Plan and a 7 percent annual gain in the Ninth Five-Year Plan. The GVIO should increase to 140 billion yuan by 2000, up 7 percent annually on the average. The average annual growth rate should be 6.2 percent in the Eighth Five-Year Plan and 7.7 percent in the Ninth Five-Year Plan. The GVAO [Gross value of agricultural output] should increase 7.7 billion yuan by 2000, the average annual gain being 4 percent during both plans. The output value of township and town enterprises should be 50.8 billion yuan by 2000, the average annual gain being 10 percent during both plans.

c) Municipal exports should increase to \$4 billion by 2000, up 8.4 percent annually on the average. Exports will amount to \$2.2 billion by the end of the Eighth Five-Year Plan, up 4.3 percent annually on the average.

d) Leading economic indicators: The overall rate of the net social output value will reach 30 percent by the end of the Eighth Five-Year Plan, up 2.6 percentage points over 1990, and 32.4 percent by the end of the Ninth Five-Year Plan. By the end of the Eighth Five-Year Plan, the overall productivity of industrial enterprises owned by the whole people that practice independent accounting will increase 3.5 percent annually on the average, the turnover period of working capital of state-owned industries within the budget will decrease from 122 days to 90 days; 6.3 tons of standard coal will be consumed to generate every 10,000 yuan worth of GNP, down from 7.1 tons in 1990, and the amount of energy and raw materials consumed by major industries for every unit of output will match the national average or be among the lowest in the nation.

e) Population: The municipality's population will be kept under 9.2 million within the Eighth Five-Year Plan and 9.7 million by the end of the Ninth Five-Year Plan.

f) Living standards and price levels: The actual per capita consumption level throughout the municipality will climb 3 percent annually on the average. The overall price level will remain within national targets.

## II. Tasks and Measures for the Major Economic Sectors

### 1) Industry

We should make full use of Tianjin's strengths in accordance with the national industrial policy and regional distribution, set priorities, transform a host of old enterprises, and put together a number of mainstay projects.

We should nurture a batch of high-tech industries, develop a host of new leading products, and build a number of large-scale enterprise groups that satisfy the demand of economies of scale. We should create an industrial structure dominated by three leading industries—petrochemical and marine chemical industries, electronics, and automobile and machinery—featuring 10 mainstay industries and 60 key products. We should actively transform traditional industries, particularly the well-established light industry and textile industry. We should continue to make use of old light industrial and textile bases. The gross value of industrial output is projected to reach 96.7 billion yuan (including 74 billion yuan generated by industries at the township level and above) by 1995 and 140 billion yuan (including 104 billion yuan generated by industries at the township level and above) by the year 2000.

#### a) Raw materials industries

We should fully utilize Tianjin's ample resources in petroleum, gas, salt, and coal, and select a number of raw material products for accelerated development. The selected industries should have a high level of technology to begin with and be poised for growth. Their products also should be in great demand by other industries. By accelerating the development of these industries, we should be able to relieve raw materials shortages and increase their contribution to the GVIO from 18 percent in 1990 to 20 percent by the end of the Eighth Five-Year Plan and 25 percent by the end of the Ninth Five-Year Plan.

Chemical industry. The chemical industry should concentrate on the development of the petrochemical industry, marine chemical industry, and precision chemical industry. It should put an end to the shortages of organic chemical industrial raw materials and intermediates. During the Eighth Five-Year Plan, the priorities are the construction of a 110,000-ton ethylene plant and a 10,000-ton methionine plant, the transformation of the "three top chemical plants," and the increase of the production capacity in ion film sodium hydroxide and high quality soda ash so that their combined output will rise from 840,000 tons to 1 million tons. We should use advanced technology to manufacture highly effective low-toxicity pesticides, high-grade dyes, synthetic detergents, titanium white powder, special resin, and other multiple processed products, and exports. In particular, we should build a 200,000-ton polyester plant in partnership with the Petrochemical Corporation.

We must continue to expand crude salt production to provide the chemical industry with more raw materials. During the Eighth Five-Year Plan, we will concentrate on the transformation of Tanggu and Hangu salt works, and increase the output of the newly built Dagang salt works from 1.72 million tons of raw salt to 2.30 million tons.

**Metallurgical industry.** We will concentrate on increasing varieties, improving quality, developing high-quality and highly efficient rolled steel to turn Tianjin into the production base of a variety of high-quality steel products and metallurgical products. At the same time, we need to solve the "cupola steel making" problem, lower production costs, improve profitability, and increase competitiveness, and build a seamless steel tube plant during the Eighth Five-Year Plan with an annual production capacity of 600,000 tons of steel and 500,000 steel tubes. We plan to build a 150,000 ton sheet plant and a high-speed wire rod mill, expand Steel Cable Plant No 2, and modernize a number of old enterprises such as the Tianjin Steel Plant. By the end of the Eighth Five-Year Plan, high-quality, high-performance rolled steel should account for about 70 percent of all steel products, up from 46.7 percent in 1990. Pig iron output is projected to increase to 1.6 million tons, up from 1,395,000 tons in 1990; steel, from 2.6 million tons to 1.67 million tons; and rolled steel, from 1,787,000 tons to 2.5 million tons.

**Building materials industry.** We will concentrate on producing materials in short supply at home and abroad, on upscale products, and on new materials by capitalizing on a combination of the municipality's natural resources and industrial and urban wastes so as to serve urban construction and industrial transformation. During the Eighth Five-Year Plan, we will build the Zhenxing Cement Plant with an annual output of 700,000 tons and modernize the Tianjin Cement Plant to increase its output of high-quality cement by 330,000 tons. We will develop alkali residual cement using the wastes discharged by alkali plants. Other products that we will develop include high-quality plate glass, multiple-processed glass products, and glass fiber products, upscale bathroom fixtures, home and building remodeling and decorating materials, and other new building materials.

#### **b) Mechanical and electronic industry**

The mechanical and electronic industry is an important sector that supplies the national economy with modern equipment and is an industry that is oriented to the international market and has a good deal of potential to export and earn foreign exchange. We will make full use of the solid foundation of the municipality's mechanical and electronic industry, extensively adopt international standards, improve product quality, and vigorously develop a family of electronic products. We will work hard to increase products that can be exported to earn foreign exchange or that can be substituted for imports. We plan to expand the output of parts and components, upgrade the capability to make whole plants, and raise the level of technology.

**Machine industry.** We will concentrate on the intensification of reorganization and technological transformation, structural optimization, and the raising of standards, and focus on the automobile industry, engineering

machinery, numerical-controlled machine tools, submerged electric oil pumps, water turbo-generators, elevators, agricultural machinery, automated instruments and meters, and other products and whole plants where Tianjin enjoys an edge.

**Automobile industry:** During the Eighth Five-Year Plan, we will work hard to expand the production of subcompact cars. After completing the transformation of the Xiali [1331 2980] sedan, of which 30,000 units will be built, we will continue to build an additional 100,000. We will remodel the light-duty truck and station wagon and design a new automobile body. Meanwhile, we will develop production of automobile engines and other parts and components. We will develop Yangliuqing as a production base for the automobile industry, and transform key industries like the machine tool industry, engineering machinery industry, and electric machinery industry. We plan to increase the number of processing centers and expand the production capacity of numerically controlled machine tools, land levelers, diesel engines, and water turbo generators, and develop them into leading products whose development will achieve substantial economies of scale. By 1995, the output of numerical controlled machine tools is projected to increase from 130 to 900 units; engineering machinery, from 140 units to 1,500 units; and submerged electric oil pumps, from 1,000 to 3,000. We will set aside resources and personnel to absorb, assimilate, and innovate on imported technology and equipment, and target the machinery of such industries as food, packaging, cement, textile, light, and chemical industries as a way of gradually enhancing Tianjin's R&D capabilities and production capacity in machinery and equipment. At the same time, we plan to step up development of the "three basics": basic parts, basic materials, and basic processes, and master electronic technology, surface treatment packaging technology, and die technology.

**Electronic industry:** We will vigorously increase the application of the electronic technology in all industries, and use electronic technology to transform traditional industries. We will expedite the development of the electronic industry, particularly those of an investment nature, and of high-tech products. As far as products of an investment nature are concerned, the focus should be on sequence control digit exchanger, optical communications products, facsimile, mobile communications equipment, communications navigation equipment, computer, and computer software. During the Eighth Five-Year Plan, we will build a 300,000 circuit program-controlled digital exchange, develop a microcomputer and new external equipment in small industrial zones making computers, and build research and production bases for fiber optical communications. We will modernize such industries producing photocopying equipment and electronic instruments and meters, and increase production capacity in the photocopier and robotic equipment industries. We will be turning to consumer goods, and actively develop new products by building on and expanding the current line of products.

By the end of the Eighth Five-Year Plan, television output is projected to increase to 3 million units, up from 1.44 million units in 1990, and video cameras, 300,000 units, up from 5,000 in 1990. We will vigorously develop the production of electronic parts and components.

### c) Light and textile industries

We will strive to improve product quality and increase designs and variety. We intend to accelerate product turnover to meet the changes in market demand at home and abroad, and increase the versatility of Tianjin's light industrial and textile products as well as their market share. When the industry or product makes the grade, we will gradually begin and end its production process on the international market in accordance with the demands of the export-oriented economy. During the Eighth Five-Year Plan, we will concentrate on transforming three industries—packaging, dyeing, and paper-making—using Western bank loans to raise the level of technology and equipment and enhance their capability to export and earn foreign exchange. We will extensively transform the cotton-spinning and wool-spinning industries, the extent of processing, and the value added. We will transform the food industry using biotechnology, and focus on food processing technology, and fermenting technology. We will try to develop novel and convenient foods as well as additives. We plan to transform a number of old enterprises and products including the bicycle industry, watch industry, and sewing machine industry. By 1995, the output of synthetic detergents is projected to increase from 85,400 tons to 126,000 tons; industrial sewing machines, from 64,000 units to 130,000 units; domestic refrigerators, from 233,000 to 700,000 units; domestic washing machines, from 330,000 units to 500,000; chemical fibers, from 75,000 tons to 90,000 tons; and print fabrics, from 270 million meters to 300 million meters.

We will continue to develop the pharmaceuticals industry. In developing chemical drugs, we will focus on drugs made from chemical raw materials, which should substitute for imports, including amino-acid-based drugs, cortex hormone-based drugs, and cardiovascular drugs. We will develop new drug types such as delayed-release drugs and target-directed drugs. In the development of herbal medicine, we will continue to develop high-quality and name-brand products and ceaselessly research new varieties. New territory to conquer include nutritious and health-enhancing products. By the end of the Eighth Five-Year Plan, the output of chemical drugs is projected to increase to 2,600 tons, up from 1,800. We will speed up the development of integrated electric medical pharmaceutical equipment and products.

To achieve the above development objectives, we must take special pains to do a good job in the following areas:

—We plan to phase in the adjustment of the industrial structure and product mix according to a plan, and apply a combination of administrative, economic, and legal tools based on national industrial policy and

Tianjin's industrial structure and product mix adjustment plan. Limits should be placed on the development of industries out of step with the municipality's industrial development direction and enterprises turning out dead-end products. On the contrary, they should be ordered to suspend operations or converted to other lines of product. The energy, raw materials, and funds thus saved should be used to develop key industries and products. We will develop neighborhood industries as appropriate depending on local conditions, based on the national industrial plan and in light of their respective characteristics.

—We plan to transform old enterprises in batches at different times and integrate such transformation closely with adjustment, reform, reorganization, importing, and the establishment of joint ventures. The central purpose is to increase economic gains. The drive should be spearheaded by mainstay products, emphasizing the application of advanced technology to create new winners in industries and products. During the Eighth Five-Year Plan, we should concentrate on overhauling such major categories of products as the two-alkali products, metallic products, machine tools, electronic parts and components, textile goods, and chemical products of daily use. Transformation should catapult a host of products to the front ranks in the nation in terms of production technology, and turn some enterprises into major new generators of profits and taxes through export.

—We should concentrate resources on a number of large key projects, and speed up the construction of projects already under way such as the 500,000-ton seamless steel tube plant, in order to put them into production as soon as possible. Construction of projects on the drawing board, including the 110,000-ton ethylene plant and the program-controlled 300,000-circuit exchange should begin at the earliest time, taking advantage of the groundwork laid earlier so as to create a reserve of staying power for industrial development.

—We plan to improve product quality, speed up product turnover, enhance quality-consciousness, and foster the idea of "quality first." All major industries should plan production in accordance with international standards or advanced foreign standards, accelerate new product R&D, work extra hard to develop new products that are efficient in the use of water, energy, and raw materials.

—We will put together enterprise groups energetically. Revolving around the development of flagship products and in line with the demand of specialization, cooperation, and economies of scale in production, we should break down the barriers between different sectors, industries, and ownership systems. Through joint action, we should put together a host of enterprise groups with new management mechanisms and realize the optimal combination of the elements of production.

—Projects already completed should be put into production properly. There are projects capitalized at more than one million yuan from the Sixth 5-Year and Seventh 5-Year Plans that have been completed but have not yet gone into production. Appropriate steps should be taken, depending on individual circumstances, to put them into production without delay.

—We plan to improve enterprise management, upgrade enterprise quality, pay attention to market research and forecasting, carry out scientific decision-making, and raise the standard of management. We will establish rules and regulations, strengthen basic management, enforce labor discipline, and cut costs and increase efficiency. We should intensify on-the-job training for workers, accelerate retraining, and raise workers' political quality, cultural and professional standards, and sense of legality.

## 2) Agriculture and the Rural Economy

We will adhere to the direction of developing a suburban and export-oriented type of economy, and remain steadfast to the goal of "serving the municipality and enriching the peasant." We plan to reinforce the position of agriculture as the base, expedite rural modernization, and make the rural economy more competitive. We plan to increase grain, cotton, and nonstaple food output and further develop township and town enterprises and foreign-exchange-earning agriculture. The GVAO should reach 6.3 billion yuan by the end of the Eighth Five-Year Plan, and 7.7 billion yuan by the end of the Ninth Five-Year Plan, or 4 percent annually on the average during both plans.

### a) Grain and cotton production

We will adjust the crop mix and pattern of cultivation, and increase the multiple crop index and per unit area yield. Total grain output is expected to reach two more landmarks in the next decade and cotton output is projected to double.

Grain. We will maintain the acreage under grain at 4.5 million mu during the Eighth Five-Year Plan when total grain output should reach 1.8 billion kilograms. During the Ninth Five-Year Plan, the average annual grain output should be two billion kilograms. In these 10 years, we will transform a total of 2.2 million mu of medium- and low-yield farmland and bring under cultivation 250,000 mu of barren land suitable for farming. We will develop an additional one million mu in grain production bases, build two cash crop bases, and strive to expand the area devoted to high-yield, high-quality crops during the Eighth Five-Year Plan. By 1995, grain output in Tianjin must provide even more forage for the livestock industry, apart from satisfying the "three needs" in the countryside.

Cotton. Working with what we have right now—300,000 mu of cotton fields and 15,000 tons of output, we must try mightily to increase per unit area yield. The area cultivated with cotton should reach 500,000 mu and

output should reach 25,000 tons by 1995, with output hitting 30,000 tons by 2000. We will build cotton production bases systematically, and strive to increase procurement to eliminate the shortage of raw cotton experienced by Tianjin's cotton spinning industry.

### b) Nonstaple food production

We will continue "food basket engineering," intensify the construction of nonstaple food bases, upgrade production technology and the levels of management, and integrate production with processing, marketing, and sales over time. Without affecting the availability of nonstaple food in the aggregate, we should work to raise quality, increase varieties, lower costs, develop processing, and widen the profit margin.

Vegetables. We should stabilize the area of vegetable bases at 240,000 mu or so and total vegetable output at 260,000 tons, increase vegetable output in the off seasons to ensure a balance in supply and demand, and gradually put "clean" vegetables on the market.

Milk. Even as we continue to develop milk cow-raising by the state, collective and specialized households should be actively supported in that enterprise. By 1995, there should be 32,000 milk cows and 100,000 tons of milk output, an increase of 24,000 tons over 1990.

Eggs. The main producers should continue to be the state, the collective, and the large specialized household. For the decade, the total number of egg-laying chickens in the municipality should remain steady at 15 million, including 11 million in the bases. Total egg output is projected at 175,000 tons.

Meat. Even as we increase the number of pigs producing leaner cuts of pork, we should vigorously raise herbivorous animals and poultry. By 1995, the number of live pigs slaughtered will reach 1.3 million and the number of chickens, 23 million. Total meat output will reach 150,000 tons, 30,000 tons more than in 1990.

Aquatic products. We will continue the policy of "developing marine culture and fresh water culture, catching and breeding, and simultaneous production and processing." We will consolidate and expand marine and fresh water breeding, develop deep-sea fishing, increase the capacity for aquatic product multiple processing, and increase the return on investment. Total aquatic products should reach 120,000 tons by 1995, up 10 percent over 1990.

### c) Forestry and fruit production

In conjunction with the project to plant trees in the areas surrounding Beijing and Tianjin, we should accelerate the afforestation of barren hills and plains. The municipality's afforestation rate should reach 12.6 percent by the end of the Eighth Five-Year Plan. We will continue

to improve the development of fruit trees, develop the gentle slope in Ji County, and come to grips with the transformation of low-yield orchards as well as fruit storage and processing. By 1995, fruit output should reach 160,000 tons, 60,000 tons more than in 1990.

#### d) Foreign-exchange-earning agriculture

We will fully utilize Tianjin's edge in land-based resources and accelerate the development of agricultural byproduct export bases, create a single production, processing, and export system. We will make more solid the existing 14 agricultural byproduct export bases, actively develop new ones, and nurture new products for export.

#### e) Township and town enterprises

In accordance with the national industrial policy and the trend toward urban-rural integration, we should adjust the product mix by concentrating on the development of products that form the accessories for major industries, that are exported to earn foreign exchange, that serve the needs of agriculture, or that have been multiply processed using local resources. The result will be a collection of township and town enterprises that are organically integrated with large industries, that is structurally sound, that supplements one another, and that boasts a number of clearly superior industries and products. The output value of township and town enterprises is projected to reach 32 billion yuan by 1995 and 50.8 billion yuan by 2000, for an average annual growth rate of 10 percent.

To achieve the above plan, we need to continue to stabilize the rural policy, rely on S&T advancements, and increase investment as appropriate. We will stabilize and improve the responsibility system, particularly the household responsibility system of linking remuneration to output. We will improve the two-level management system combining centralization with decentralization, and actively develop all manner of socialized service systems. We will bring together the advantages of collective and unified management, on the one hand, and the initiative of family contract management, on the other, and develop and build up the strength of the collective economy. In areas where the necessary conditions are in place, different forms of scale management should be introduced as appropriate in accordance with the peasants' wishes and depending on local conditions.

—We will appropriately use science, technology, and education to vitalize agriculture. We plan to enlarge the corps of agricultural S&T workers, intensify S&T research in agriculture, and establish a comprehensive dissemination system for agricultural S&T achievements. We should popularize good breeds and varieties, advanced cropping systems, and scientific breeding and cultivating techniques over wide areas. We plan to develop water-saving crops, expedite the construction of meteorological facilities, and use modern technology to improve our ability to monitor and forecast weather changes that can cause major disasters. We will continue to implement the "Spark

Program," "Project Harvest," and "Project Prairie Fire," and expand rural education to improve the caliber of the peasants.

—We plan to raise funds in a variety of ways to expedite the construction of agricultural infrastructural facilities. The municipality, districts, counties, and townships must all take active steps and work hard to increase agricultural inputs. They must insist that industry support and nourish agriculture, and gradually establish an accumulation system for the collective. In particular, we should encourage and guide peasants in increasing labor accumulation and investment in agriculture. We plan to create conditions for increasing agricultural output in every way, and strive to increase the production of chemical fertilizers by building an urea facility with an annual output of 110,000 tons at the Tianjin Soda Plant, and transforming small chemical fertilizer plants such as Wuqing. That will boost chemical fertilizer output throughout the municipality to 500,000 tons, basically enough to meet demand. We will develop water resources comprehensively, connect the north and south water systems, and increase the regulatory and reserve capabilities. We plan to expand the irrigated area, build water conservancy works, and make sure that farm machinery and farm tools are compatible with one another. We have plans to increase the extent of agricultural mechanization, develop forage resources, and improve the quality of forage and their prices.

—We should remain steadfast to the following principle: "Support energetically, plan rationally, guide properly, and step up management." We should guide township and town enterprises to further adjust the structure, accelerate technical transformation, and improve product quality, technical standards, management standards, and economic results, thereby facilitating their continued healthy development.

### 3) Commerce, Materials, Banking, and Tourism

The development of commerce, materials, banking, and tourism is an important aspect of the drive to optimize Tianjin's economic structure, bring out its full potential as an economic center, promote coordinated national economic development, and quadruple the gross output value. We will continue to take practical measures to accelerate development in industries that are out of step with national economic development and with the improvement of living standards, and put an end to all unfavorable conditions in them.

#### a) Commerce

The principal goal is to bring about mass commerce, mass circulation, and mass marketing. We have plans to vitalize the urban and rural markets, increase their capability as collecting and distributing centers, expand the scope of service, and increase economic results. By 1995, total commodity sales are projected to jump 92 percent to 34 billion yuan, or 14 percent annually on the

average, while social commodity retail sales will reach 30 billion yuan, up one-fold, or 15 percent annually on the average.

We plan to put together a fluent and highly efficient circulation system amenable to regulation and control, and which fully utilizes the state-owned commercial sector as the main channel and reservoir. We will throw open the door of the municipality, open up the market, and go far and wide to sell and to buy. We plan to improve the level of services. During the Eighth Five-Year Plan, we will speed up the construction of commercial facilities, and gradually build multi-functional commodity collecting, distributing, and exchange centers, commodity circulation centers, shopping centers, and commodity information centers. We will build a host of wholesale markets for agricultural products where the municipality and the suburbs meet, and will build an aquatic products wholesale market along the coast. The plan calls for developing the warehouse industry to keep up with expanding circulation. We will build new warehouses and refrigerated storage facilities, and redouble efforts to develop retail commerce and the services sector. We plan to improve the three-level retail network consisting of the municipality, districts and counties, and neighborhoods, and adjust the trade structure and distribution of sales outlets. The plan also calls for revitalizing and developing traditional characteristics, vitalizing the market, ensuring supplies, transforming a number of large- and medium-sized shopping centers, and developing a number of specialized markets, general stores, and special streets, each with their own characteristics. We should transform and increase the number of commercial and service points, and combine the development of state-run and collective commerce with that of private and individually owned businesses, restaurants, and services.

We will continue to develop commercial undertakings on a substantial scale that will meet market needs and boast fairly advanced technology and equipment.

#### **b) Materials**

To meet the needs of a developing socialist commodity economy, we must strengthen macroeconomic regulation and control over the movement of social goods and materials and invigorate materials circulation. We should secure the sources of goods in the municipality, aggressively attract the central government's goods and materials unit in Tianjin and goods sources outside the municipality. We should make use of Tianjin as a goods circulation center, assiduously develop a capital goods market, and build a number of comprehensive wholesale exchange centers and special markets. We should develop goods and materials enterprise groups, put together some inter-regional, inter-sectoral joint materials marketing and sales economic entities. We should transform and develop a number of materials processing and distribution centers, and increase the number of materials retail outlets in accordance with the principle of making things convenient for users and the idea of

rational distribution. We also should gradually establish a number of bases for goods and materials in short supply.

We should further intensify the management of goods circulation, computerize our warehouse management and information transmission by employing modern methods, and organize and guide the buying and selling of goods and materials.

We also should tackle materials recycling, conservation, substitution, and comprehensive utilization, and get more out of what we have.

**c) Banking** We should further improve the banking system, develop a financial market, expand inter-bank lending and foreign exchange regulation, and steadily enhance the macro regulatory and control ability of the financial sector to pool funds, guide the flow of funds, and regulate economic operations. Our plans call for developing the savings business vigorously and offering home-ownership savings accounts and advance purchase savings accounts and extending home-ownership loans. We will expand domestic and foreign trusts and issue a variety of bonds. We will experiment with the systematic issuance of stocks at selected points and gradually improve the stock exchange to channel idle funds in society into the realm of production and construction. In conjunction with the adjustment of the industrial structure and product mix, we will determine a reasonable direction for the flow of funds and regulate such a flow by combining the invigoration of existing funds with the increase of funds in order to help speed up fund turnover among enterprises and increase the return on capital. We will establish a local account settlement center and a nonlocal account settlement center, computerize methods of payment, and plan for the opening of a branch of the Commercial Bank in Tianjin. We plan to put together Sino-foreign banking joint ventures, and attract foreign banks to open branches in Tianjin. We will develop urban credit unions, enterprise finance companies, and other financial institutions to help vitalize the use of funds, expand the utilization of foreign funds, and increase banking exchanges with other nations.

We will continue to develop the social insurance business. After consolidating and improving the range of insurance types available now, we should expand foreign insurance, life insurance, and agricultural insurance, and offer new insurance types. We will enhance society's ability to make compensation, ensure social stability, and facilitate the smooth progress of reform and the open policy.

#### **d) Tourism**

We should fully utilize existing tourist facilities and resources, vigorously develop domestic and foreign tourism, and integrate tourism into foreign economic relations and trade, cultural and sports activities, and S&T and educational exchanges. We should also offer international cruises, organize international conferences

and exhibitions, and develop special tours to turn Tianjin into an important window on modern China. We need to further improve the tourist environment and do a good job in the preservation and construction of tourist spots, as well as build new tourist facilities. We need to intensify macro-management, improve the quality of services, broaden the range of consumption, enrich the people's way of life, and develop an export-oriented economy.

#### **4) Energy, Transportation, Posts and Telecommunications**

Plans call for speeding up the development of energy, transportation, communications, and other urban infrastructural facilities. We need to optimize and make sure these services are coordinated and ensure that they fulfill the needs of economic development and improvement of living standards.

##### **a) Energy**

We should adhere to the principle of paying attention to both development and conservation, with emphasis on the latter. In nonrenewable energy, we need to concentrate on the prospecting and exploitation of the Dagang and Bohai oil and gas fields, and develop the Beitan coal field.

**Electric power:** During the Eighth Five-Year Plan, we will complete phase 4 of the Junliangcheng power plant and phase 2 of the Dagang power plant, and develop the Chentangzhuang heat and power plant and the Yangliuqing power plant. The municipality's total generating capacity will reach 4.34 million kilowatts, including 2.30 million kilowatts in newly installed capacity. Concomitant with these projects, we should build the necessary electric delivery and transforming facilities. We should adjust and overhaul the existing electric network step by step to increase the capacity for comprehensive power supply.

##### **b) Transportation**

We should continue to improve the land, sea, and air transport network centered on the port, and make the transportation network meet the needs of economic development. During the Eighth Five-Year Plan, the municipality should finish the construction of six berths to the north of the Dongtu embankment and build new oil, coal, and ore berths in the Nanjianggang area to ensure that coal is shipped overseas through the port of Tianjin. During the Ninth Five-Year Plan, we plan to build five new multi-purpose berths at Beigang and continue to develop Nanjiang, gradually transforming the port of Tianjin into one of the hubs in the nation. The port's handling capacity will reach 33 million tons by 1995 and 52 million tons by 2000. We should energetically develop transportation between Tianjin and Europe over the continental bridge, and continue to improve the Tianjin railroad. We need to step up the construction of major freight yards and circular routes, and increase rail pass-through capability. We have plans

to develop the local Zhoulu Railway, extend the Ligang Railway, and overhaul the Tianjin section of the Shangguang Highway. We will complete a number of main highways including the Beijing-Tianjin-Tangshan expressway and the Jinggang Highway. We will build up the Tianjin highway as a main transportation hub, and improve coordinated civil aviation facilities at the airport. We will develop an aviation base that "accommodates both passenger and freight traffic, with emphasis on the latter." We need to further develop shipping and increase waterborne transportation capacity. By 1995, the municipality's total volume of transported goods will amount to 260 million tons, up 25 percent over 1990, while the number of passengers transported will reach 46.7 million, up 28 percent.

##### **c) Posts and telecommunications**

We will continue to expand the municipal telephone network and long-distance communications network, and improve basic and accessory facilities. By 1995, the municipal telephone exchange will have between 477,000 gates and 527,000 gates, up from 227,000 gates in 1990, a net increase of between 250,000 and 300,000 gates in 5 years. The automatic long-distance exchange will grow to 10,000 circuits, up from 2,500, and a number of international lines will be opened up. We will improve the postal network and distribute postal facilities rationally. In 1990, the postal and telecommunications sector handled 3.30 million yuan worth of transactions. That number is expected to double by 1995.

#### **5) Lateral Economic Associations and Cooperation**

Stepping up lateral economic associations and cooperation with the interior is a major aspect of Tianjin's push to fulfill its role as an economic center, open up to the interior as well as the outside world, and invigorate production and circulation. We should continue to adhere to the principle of "mutual benefit, risk-sharing, and highlighting the strengths and minimizing the weaknesses" and proceed from the municipality's overall strengths to develop lateral economic and technical exchange and cooperation at different levels, in different fields, and through multiple channels. This will contribute to the municipality's own economy and that of the interior.

During the Eighth Five-Year Plan, with our sights set on raw materials badly needed for production and construction in the municipality, we should, through joint development, set up a number of long-term raw materials production and supply bases in those areas in the interior where the resources are being produced, thus bringing together the municipality's strengths, namely, its port, technology, domestic and foreign trade, qualified personnel, as well as the strength of the interior, namely, ample resources, to jointly produce good quality name-brand products and conquer a larger slice of the market. We will set up export-producing bases through joint operation and other methods of cooperation in order to increase exports and foreign exchange earnings. In the

area of circulation, we can expand commodity and materials circulation through joint supply and joint marketing, or through a purchasing and marketing agency.

We should fully utilize the concentration of S&T research institutions and talent in the Beijing-Tianjin region to tackle problems together, develop a product jointly, and exchange qualified personnel.

We should continue to provide appropriate targeted support for areas inhabited by minority nationalities in accordance with national needs.

### **III. Foreign Trade and Economic and Technical Exchanges**

We should fully utilize Tianjin's status as a key northern port and municipality and the existence of a long-standing industrial base to successively open up the three areas, namely, the port and development zone, the municipality proper, and the suburbs. We will strive to increase exports and foreign exchange earnings and utilize foreign capital enthusiastically and effectively in order to expedite the development of an export-oriented economy in the municipality.

#### **1) Exports**

Tianjin's exports are projected to reach \$2.2 billion by 1995 and \$4 billion by 2000. To boost exports, we must work hard to adjust the export mix in accordance with the demands of the international marketplace, improve and expand traditional exports from the textile industry and light industry, increase electrical machinery exports, and exports of complete plants and technology, and develop a host of leading exports. We should diligently cultivate the international market. Even as we consolidate and develop traditional markets, we must work to open new markets, find new customers, and broaden export channels. We should actively support large-scale and technology-intensive enterprises and enterprise groups so that they will be able to export on their own. We will work hard to increase exports of enterprises funded by the three capital sources. Taking full advantage of the window provided by the development zone, organizations stationed overseas, and foreign ports, we should be able to export through a variety of channels and ports and in various ways. We will continue to reform foreign trade and improve the foreign trade contract responsibility system.

In accordance with the principles that the enterprise should be given decisionmaking authority in its operations and assume responsibility for its own profits and losses, that trade and industry be integrated, and that a united front be presented to the outside world, we should continue to improve the foreign trade procurement system and actively popularize the agency system. Foreign trade agencies should step up management, reduce interference, and decrease spending. Trade and industry must work hard side by side to bring to below the national average the cost of earning foreign exchange.

We should actively develop labor exports and international tourism, bid for projects overseas, and offer insurance involving overseas operations. We should enter the international shipping business in order to increase nontrade foreign exchange earnings.

#### **2) The Utilization of Foreign Capital**

We will insist that foreign capital be spent mainly on production-oriented projects, on projects that export and earn foreign exchange, and on high-tech projects. We plan to combine export with import substitution, to import and assimilate, to transform old enterprises by using foreign capital, and to improve the intangible investment climate with the tangible investment climate. We will work hard to increase the return on foreign capital.

##### **a) The indirect utilization of foreign capital**

We will earnestly improve unified management over the borrowing, use, and repayment of foreign capital. We should diligently optimize our foreign debt mix by seeking loans from international financial organizations and bilateral government-to-government loans. A greater proportion of our loans should be long-term, low-interest loans. We should push for the diversification of our loans in terms of country of origin and geographical spread, and strictly limit foreign loans that are relatively costly. We should steer foreign capital into proper usages by focusing on mainstay projects that fall in line with the municipality's direction of economic development and that will make us highly able to repay the loan, or on projects that involve the transformation of old enterprises. Severe restrictions should be imposed on the examination and approval of nonproduction projects and those that entail a limited ability to repay the loan. We should intensify the scientific management of a project in its early phase and tighten the procedures to prevent any mistakes in investment decisionmaking. We plan to institute management by objective and a repayment responsibility system within a project. We should continue to adhere to the principle of making the repayment of foreign debt a top priority. Productive projects financed primarily with foreign capital shall be required to pay off their debts on their own. We will set up a foreign debt repayment fund to ensure that foreign debts are to be repaid on schedule. Tianjin should be able to put to good use and repay what it borrows.

##### **b) The direct utilization of foreign capital**

We should work more aggressively to attract foreign capital through a variety of means and effectively and systematically transform old enterprises, especially through the means of joint ventures and contractual joint ventures with foreign investors. In particular, we should transform a host of old enterprises that can fuel the development of other enterprises through the "trickle down" effect. We should further improve the intangible investment climate, work hard to raise efficiency, draw

up comprehensive laws and regulations governing foreign economic relations, and improve services for foreigners.

### 3) Economic and Technical Development Zone

The industrial zone currently has an area of 3 square kilometers. Another 10 square kilometers will be built, including 5 square kilometers to be completed during the Eighth Five-Year Plan. After the current 1.2 square kilometers of residential area have been completed, an extra 1.5 square kilometers would be developed during the Eighth Five-Year Plan. In the zone, banking, insurance, customs, commerce, entertainment, and public utilities should all operate in a coordinated manner. We plan to attract foreign capital from even more diverse sources and combine the preferential policy of the zone with the municipality's strength in industry. We will encourage enterprises in the municipality to develop leading projects in the zone to spearhead the transformation of old enterprises. We will also encourage enterprises in the interior to build plants and operate factories in the development zone.

### 4) Port Tax-Protected Area

We will accelerate the establishment of the tax-protected area by building on the present tax-protected warehouse and relying on the port of Tianjin for support. We will also further open up Tianjin to the world by developing international entrepot trade and export processing. We will develop transshipment by utilizing the continental bridge between the port of Tianjin and Europe. We should promote the economic development of Tianjin and the vast hinterland.

## IV. Science, Technology, and Education

### 1) Science and Technology

We will continue to follow the principle that "economic construction must rely on science and technology, while scientific and technical work must be oriented toward economic construction." We will accelerate the conversion of major S&T achievements into productive forces and promote the modernization of production technology and agricultural and industrial equipment, and thereby help improve the quality of the national economy as a whole, the development of an export-oriented economy, and the staying power for development. Our priorities in the Eighth Five-Year Plan are:

a) To marshall S&T forces in all quarters in the municipality to tackle 10 key S&T projects, namely, the use of domestic parts and components in the making of Xiali [1115 0448] sedans, light engines, computer and exterior equipment, numerically-controlled machine tools and processing centers, communications equipment, medical electronics, submerged oil electric pumps, new detergents, titanium powder, demonstration projects in high-yield crops, and the comprehensive development and

utilization of forage resources. The idea is to overcome the major technical problems and raise the level of production technology.

b) We will successfully disseminate and popularize the application of 100 major S&T achievements, increase yields in grain and cotton, vegetables, and livestock, and develop energy-efficient raw materials, electronic communications, and mechanization. We will use advanced and appropriate technology to transform traditional processes.

c) In accordance with the demand of "producing one generation, trial-manufacturing another, researching and developing yet another, and conceiving yet another," we must mobilize all S&T forces in all quarters to concentrate on the R&D of 30 kinds of products and technology, ensure constant product turnover, and expedite the upgrading of Tianjin's line of products.

d) We need to come to grips with the absorption, assimilation, and import substitution of Tianjin's imports. In conjunction with our offense on the S&T front, we should work to manufacture whole plants so that over time, we will graduate from the import of technology and its assimilation, to import substitution, exporting, and the earning of foreign exchange.

e) In accordance with the principle of "limiting our goals but emphasizing what is important," we should aggressively research a host of new technologies in which Tianjin is already beginning to gain an edge: electronic communications, fiber optics communications, and the integration of electronic machinery, robotics, biotechnology, and new materials. We will continue with the Spark Plan, build new-tech industrial parks, and bring together the preferential policy approved by the state and Tianjin's own strength, namely, our S&T personnel, to spawn new-tech and high-tech industries.

We will continue to conduct reforms in S&T and work to set up a dynamic and efficient new system in which scientific research, importation, innovation, dissemination, and application are closely integrated and will keep pace with the growing economy. We will draw up a comprehensive policy on the promotion of S&T progress and formulate relevant laws and regulations. We will make a mighty effort to develop an S&T market and continue to increase investment in S&T. We have plans to selectively equip a number of scientific research institutions, intensify basic research, applied research, and research in the soft sciences. We will redouble our efforts to develop a host of scientific research units and a corps of scientific research personnel. We will train a group of young and middle-aged personnel to be the backbone of the scientific research corps and leaders in their disciplines. By 1995, overall technical standards in key industries should meet those of their international counterparts during the late 1970's and, in the case of some new industries, the standards of the 1980s. By the year 2000, overall technical standards of key industries

should equal the late 1980s' and early 1990s' standards of their international counterparts.

## 2) Philosophy and the Social Sciences

We must adhere to the principle of taking Marxism as the guide and integrating it with reality, steadfastly combine applied research with basic theoretical research, with emphasis on the former, and contribute to the construction of the material civilization and spiritual civilization.

a) We should intensify research on the major theoretical and practical issues encountered in developing socialism with Chinese characteristics, particularly major issues relating to reform, to the open policy, and to Tianjin's economic and social development in the 1990's. We need to concentrate on the research of these key topics: integrating economic planning with market regulation; making the most of Tianjin as an economic center; vitalizing large- and medium-sized state-owned enterprises; developing an export-oriented economy; adjusting the product mix and industrial structure; combining production with science and technology; combining democracy in the present stage with legal construction, international political and economic developments, and the contemporary international communist movement, and thereby serving social and economic development and the drive to make decision-making democratic and scientific.

b) We will continue to uphold and develop the Marxist philosophy, political economy, and scientific socialism, and root out the negative influences of the bourgeois liberalization trend of thought. We will clarify what is correct and incorrect in our thinking and theories. During the Eighth Five-Year Plan, we will focus on the development of scientific socialism, theoretical economics, industrial economics, trade and financial economics, world economics, contemporary philosophy, modern history, law, sociology, and education.

c) We will remain steadfast to the principle of "letting a hundred flowers blossom and a hundred schools of thought contend." We plan to launch extensive academic exchanges and promote the airing of different academic viewpoints to form a healthy environment for theoretical research that will nourish and develop all research areas in the social sciences.

d) We will reinforce the development of a corps of social science researchers, redouble our efforts to train young theoretical workers, and adjust and improve social science research institutions. We will further improve the conditions and facilities in which social science research is conducted, encourage social science workers to orient themselves to reality, integrate with the masses, and be innovative and fruitful.

## 3) Education

We will continue to implement the principle that "education must serve socialist modernization, be integrated

with production and labor, and turn out workers and successors with well-rounded development, morally, intellectually, and physically." We will further correct the guiding thought behind education, emphasize the correct political direction above all else, and improve the ideological, political, and professional standards of those who teach and those who are being taught. We expect to produce about 170,000 various qualified personnel above the special secondary school level during the Eighth Five-Year Plan, and another 200,000 or so during the Ninth Five-Year Plan.

### a) Basic education

During the Eighth Five-Year Plan, nine-year compulsory education will be universalized in the countryside while education at the senior high school level would be popularized in urban areas. Using a variety of methods, we will solve the "twin peaks" problem concerning the number of pupils admitted to primary school and junior high school. We will improve the quality of teaching at both the primary and secondary school levels as well as the municipality's ability to operate and run schools. We will develop preschool education and special education for handicapped and mentally retarded children.

### b) Vocational and technical education

We will draw up a comprehensive plan for regular senior high schools, special secondary schools, vocational senior high schools, and technical schools during the Eighth Five-Year Plan. We will adjust the mix of specialties and disciplines offered, make the most of technical secondary schools as the mainstay of vocational and technical education, and conduct pilot projects in post-secondary vocational and technical education. The overwhelming majority of new entrants into the rural labor force should have received vocational or technical education or training at varying levels. New workers in enterprises should have received the necessary pre-employment training and job-related training.

### c) Regular higher education

During the Eighth Five-Year Plan, we must enforce the principle of "adhering to our direction, stabilizing the scale, optimizing the structure, deepening reform, improving conditions, and bettering quality." We should maintain the present scale of education at both the graduate and undergraduate levels and simultaneously work to improve them. We need to develop professional training as appropriate, and do well in adjusting the regular institutions of higher education. We should optimize the pattern of higher education and the mix of specialties it offers so that we can gradually develop a number of key colleges and universities on a considerable scale. In accordance with the demands of the export-oriented and open economy, we must step up foreign language instruction from the primary school level on up and accelerate the training of a host of qualified personnel needed by our export-oriented economy and developments in all areas. Enrollments in

local institutions of higher education are projected to reach 29,000 in 1995 and 34,000 in 2000.

**d) Adult education**

We must implement the "Regulations on Workers' Education in Tianjin" and the "Continuing Education Regulations for Professional and Technical Personnel in Tianjin" across the board. We should offer training in a variety of forms and in a variety of ways, and commit ourselves to developing job training and continuing education in order to continuously upgrade enterprise workers' cultural, technical, and professional standards. After rectifying adult formal higher education, we should put adult higher education on a sound footing, improving the quality of education in earnest. We ought to Continue to improve the three-tier adult educational system in the countryside to raise the educational and cultural standards of the vast number of workers and increase their ability to apply new agrotechnology.

To promote education, we must continue to intensify educational reform, and raise the standard of educational management by gradually improving the management system for every type of education. We should mobilize social forces in all quarters to support education, raise funds from all sources, and increase educational investment. We must improve the conditions of education, push for an increase in the return on educational spending, and do a proper job in allocating college graduates and secondary technical school graduates. We should Continue to turn out more and better teachers, and strive to improve their professional and political qualities. In society, we must continue to reinforce the good habits of respecting knowledge and honoring qualified personnel. We should improve the working and living conditions of intellectuals and enable them to play their key role in socialist modernization.

**V. Urban and Rural Construction; Land Development and Management**

**1) Urban and Rural Construction**

We must plan comprehensively, set priorities, do a good job in preservation, and make steady progress so that urban construction is coordinated with economic construction. Besides improving the existing facilities, we must devote the Eighth Five-Year Plan to improving these weak spots:

**a) Housing**

We must merge the transformation of older areas with the construction of new ones, and continue to improve the housing conditions of urban residents. During the Eighth Five-Year Plan, 10 million square meters of new residential housing will be built, basically resolving by 1991 the housing problems of hardship households whose members have less than 2.5 square meters of living space each on the average. We should improve the livability of housing, promote the use of energy-efficient new materials in housing construction, and complete the

renovation of the existing 3 million square meters of dilapidated housing within a decade. We must provide the proper related facilities in residential areas.

**b) Urban roads and transportation**

We need to construct the urban road and transportation system based on the "three circular routes and 14 routes spreading out from a center," and renovate the interior circular routes. We must build additional bridges, widen main roads spreading out from a center, remove some checkpoints, and open up some dead-end streets. We ought to repair old and dilapidated bridges, develop public transportation, and modernize and increase vehicles. We must open up new routes and step up the scientific management of urban transportation.

**c) Water supply and drainage**

We must complete phase 2 of the Xinkai River Water Plant and related water supply and piping works during the Eighth Five-Year Plan, which will boost daily water supply capacity by 500,000 tons. Other priorities are to supply water drainage where none now exists and to lay sewers. Scheduled to be built are 450 kilometers of sewers while drainage area will increase 40 square kilometers. With the completion of the sewage treatment plant in the eastern outskirts, which is capable of handling 400,000 tons of sewage everyday, the municipality will be able to process 660,000 tons daily.

**d) Urban gas supply**

We must continue to modernize and build gas supply projects, expand the sources of gas, and ensure gas availability during times of peak use. We must tighten management. There should be a balance between domestic gas consumption and industrial gas consumption. We must economize in the use of gas. During the Eighth Five-Year Plan, we ought to modernize the No. 1 Gasworks, expand the No. 2 Gasworks, and build the No. 3 Gasworks; improve the network of gas pipelines and other related facilities; and build the Dagang-Liulin natural gas line and a second liquefied gas line between Dagang and Beicang. We must increase gas-consuming households by 200,000.

**e) Centralized heat supply**

Even as we are hard at work developing heat supply for industry, we should continue to expand the area of civilian heat supply by making full use of heat and power plants, centralized boiler rooms, thermal heat, industrial residual heat, joint heat supply, and other methods. Also, the state, collective, and the individual must share the costs to speed up heat supply in the municipality.

**f) Township and town enterprises**

This principle must be implemented: "Plan comprehensively, step up management, use land economically, suit measures to local conditions, do what one can do, and make steady progress." Construction of a small industrial zone or market town should be allowed to drive the

development of an entire township. We must conduct pilot projects in the construction of new market towns at selected sites in the outskirts during the Eighth Five-Year Plan. The market towns should be distributed properly, boast a full range of necessary facilities and a clean environment, be highly accessible, and have their own distinctive characteristics. During the Ninth Five-Year Plan, the market towns are scheduled for further development. Improvements should continue to be made in rural roads, water supply and drainage, drinking water fluoridation, energy, posts and telecommunications, culture, education, rural housing conditions and other selected projects. The training of construction personnel in townships should be stepped up.

**g) Parks and tree-planting**

We must adhere to the principle of "building new parks and preserving old ones simultaneously, paying equal attention to development and consolidation, and integrating the experts with the masses." Even as we improve existing green space, we should work hard to build new parks, and launch a concerted voluntary tree-planting campaign involving the entire citizenry. By the end of the Eighth Five-Year Plan, public green space will increase by 281 hectares throughout the municipality, while 17.5 percent of the municipality will be covered with trees, up from 15 percent. Per capita green space will increase from 2.2 square meters to 2.9 square meters. We must continue with road repairs, beautify the city, and improve the overall street-scape.

**h) Civil air defense build-up**

We must implement the principle of "persevering long-term, combining wartime preparation with peace-time construction, planning comprehensively, and setting priorities." We should step up the preservation, modernization, and comprehensive utilization of existing civil air defense facilities; continue to do a good job in the construction of new projects in conjunction with urban development; and fully utilize civil air defense and improve the overall defense capability of the municipality.

**i) Building industry**

To meet the needs of economic development and urban construction, we must stabilize the overall size of the corps of construction workers and continue to adjust the mix of these workers. We must beef up the backbone of the force, increase the number of workers in industrial installation and decoration, and improve their equipment. We should conduct pilot projects in general contracting involving design, scientific research, and construction, and increase the comprehensive contracting capability. We need to open up the domestic and international markets energetically through multiple channels, and organize labor exports. We have to improve the management of the construction industry as a whole as well as management inside the enterprise, redouble our effort to improve productivity, cut down on waste, and increase profitability.

**2) Land Development and Management**

We must sort out the relations among economic development, population, resources, and environment in accordance with the demand of national legislation and the laws of economics. Proceeding from the reality in the municipality and guided by the industrial policy, we should practice sound geographical specialization and do a good job in land development and land management in the municipality in earnest.

**a) Resource prospecting, exploitation, and utilization**

Priorities in the Eighth Five-Year Plan are as follows: determine the municipality's oil, natural gas, underground water, thermal heat, coal, and coal gas resources as well as mineral deposits in the hills of Yi County; actively look for ways to exploit and utilize the resources comprehensively; gradually put together a system to manage the exploitation and utilization of the municipality's land, water, and major mineral resources; and severely restrict all land uses.

**b) Project distribution**

In accordance with the demands of overall urban planning and urban-rural integration, we should continue to distribute construction projects and industry properly. We must speed up the development of the coastal area. In the coming decade, including the Eighth Five-Year Plan, key industrial plants, both newly built ones and relocated ones, should be sited along the coast as a rule. Some of the municipality's enterprises that consume a good deal of energy and water and turn out labor-intensive products should be moved out of town and distributed widely in the outskirts to put an end to the over-concentration of industry in the municipality. We must develop the tertiary sector in the municipality vigorously and work hard to make industry more upscale. We need to continue to develop the industrial area in the lower reaches of the river and along the coast to shift the industrial center to the east. In tandem with industrial adjustment and modernization, we should vigorously develop satellite towns in both the close-in and more outlying outskirts. We must do an even better job in county town and township development; distribute productive forces between districts and between the municipality and the countryside even more properly; and continue to do a good job in the adjustment and improvement of the overall urban plan as well as the formulation of area plans.

**c) Water resource development and flood control**

Water resource development essentially means completing works relating to the project to divert the waters of Yi He into Tianjin and ensuring that water source works are maintained and water resources protected. We must expand the comprehensive utilization of sea water and the treatment and reuse of urban sewage, improve management, and economize on water use. In conjunction with the project by the central government to divert water from the south into Tianjin, we should put up the

related water source facilities within the municipality. Make flood prevention a success. We must accelerate the removal of silt from the river mouth, consolidate Haidang, and step up the management and utilization of river waterways at grade one and grade two. We should raise flood control standards steadily to ensure safety in high-water season.

#### **d) Environmental protection and management**

We must adhere to the principle of "planning, implementing, and developing economic construction, urban-rural construction, and environmental construction in tandem" so that the latter is coordinated with national economic and social development. In environmental protection, the emphasis should be on solving water pollution, air pollution, solid waste, and noise pollution. We should come to grips with comprehensive environmental treatment and tackle the major pollution sources. We must make a mighty effort to meet national class two standards for atmospheric environmental quality; increase the industrial sewage treatment rate from 50 percent to 70 percent, the rural sewage treatment rate from 19 percent to 38 percent, and the trash detoxification rate from 30 percent to 60 percent; and reduce the average regional noise level from 61 decibels to 60 decibels. In environmental management the focus is on protecting water sources, preventing soil salination, conserving water and soil, and improving environmental quality. We should step up the comprehensive management of the environment and public health and gradually improve environmental facilities to meet national urban sanitation standards. We must continue to take measures to control surface subsidence, and improve earthquake forecasting and use all kinds of construction methods to make buildings and other structures more earthquake-resistant.

We need to continue to do a good job in land-use planning in line with the overall national land use plan for the Beijing-Tianjin-Tangshan region. We must expedite the formulation of the municipality's land use plan, intensify national plan use policy studies, formulate comprehensive land use legislation, and make the most of land use policies and laws in national land use development and management.

### **VI. People's Livelihood and Other Social Undertakings**

#### **1) Incomes and Consumption Patterns**

Assuming rising output and increasing productivity, the living standards of urban and rural residents will continue to improve. The actual level of consumption of the municipality's population will increase 3 percent annually on the average in the next decade.

As incomes go up, the consumption of urban and rural residents will grow in quality and quantity. Their diet will improve and become more nutritious. They will be wearing better clothing. Among urban residents, per capita living space will increase, as will the proportion of people who live in houses with gas and home heating. By

the end of 1995, per capita living space in urban areas will reach 7.2 square meters, and 90 percent of urban residents will have gas in their homes, while 20 percent will enjoy home heating. By the Ninth Five-Year Plan, per capita living area will reach 8 square meters while 40 to 60 percent will live in houses with home heating. Residents will continue to own an ever rising number of upscale durable consumer goods. By the end of the Eighth Five-Year Plan, there will be 8 telephones per 100 residents, up from the current 3.6, and 15 telephones per 100 residents by the end of the Ninth-Five Year Plan.

#### **2) Population and Employment**

The population issue plays a pivotal role in economic and social development overall. The basic national policy of family planning must be adhered to unwaveringly. During the Eighth Five-Year Plan, China will still be in the third baby boom since the founding of the People's Republic of China, and the population growth situation will remain grim. Therefore we must make people more aware of the population and of per capita, and stick to the policy of controlling population growth stringently. We must continue to educate the people in marrying late, having children late, and planning their family. We should strongly advocate one child per couple, and strictly limit unplanned births. We must redouble our effort to abolish early marriage and early childbirth, at the same time doing a good job in teaching good prenatal care and patenting practices. The focus of family planning should remain the countryside, and we ought to take effective measures to bring down the rural birthrate. We need to intensify the management of family planning among the permanent floating population. During the Eighth Five-Year Plan, the municipality's population growth rate should stay below 12 permillage, 3 permillage less than in the Seventh Five-Year Plan. This should include a natural population growth rate of 7.1 permillage, 2.7 permillage less than in the Seventh Five-Year Plan. The mechanical population increase should not exceed 30,000 per year on the average. By 1995, the municipality's total population should be limited to within 9.2 million. During the Ninth Five-Year Plan, the natural population growth rate should stay within 6.2 permillage. By 2000, the municipality's population must not exceed 9.7 million.

During the Eighth Five-Year Plan, we must continue to widen employment opportunities and spare no effort to find jobs for people waiting for employment in townships. By taking a variety of measures, such as adopting the "one primary and several secondaries" approach and developing tertiary industries, we must place redundant enterprise workers in jobs. We must try hard to find jobs locally for surplus rural workers, and strictly limit the number of agricultural workers shifting into nonagricultural lines of employment. During the Eighth Five-Year Plan, the number of agricultural workers who shift into nonagricultural employment should not exceed 150,000, or about 30,000 each year.

### 3) Social Insurance

We must establish and perfect a variety of social insurance programs without delay to socialize and network social insurance as soon as possible, and further improve services for the elderly. We must increase facilities that serve the elderly so that they are taken care of, receive medical treatment, are educated and entertained, and can make themselves useful. We need to make the most of the district and the neighborhood, establish a community-based service delivery system, and develop social services. We must ensure that disabled servicemen are given special care and the poor are given relief, and continue to show concern for the disabled and solve their rehabilitation, work, livelihood, and educational problems. We ought to vigorously develop social insurance undertakings in the fields of elderly care, employment, health care, and industrial injuries, and increase the capacity to provide social insurance.

### 4) Culture, Public Health, and Sports

We need to further develop culture and arts, accelerate the construction of cultural facilities, build libraries, cultural centers, arts centers, and other facilities where cultural activities take place, and build museums of art and science and technology. We must preserve and protect scenic spots and historic sites, and work hard to satisfy the ever-growing cultural needs of the masses. By the end of the Eighth Five-Year Plan, 1.2 billion pages will have been published and 98 percent of the population will have access to radio and television broadcasting. The number of radio series will increase from five to seven, while the number of television shows increases from four to six. We will gradually develop cable television and build a television broadcasting tower. We ought to increase activities facilities for women and children.

In public health, we should implement the principle of "focusing mainly on prevention, relying on scientific and technical progress, mobilizing the entire society to participate, balancing Western medicine with Chinese medicine, and contributing to the people's health." We ought to invest in public health through various channels and improve the three-tier health care network—municipal, district, and county. We must improve the conditions of health care, raise health care standards, and gradually improve the municipal-level general hospital and a number of special hospitals. We need to build Children's Hospital No. 2 and beef up health care institutions. We have to step up the monitoring, prevention, and treatment of major diseases. The law stipulates that the incidence rate of infectious diseases be limited to 5 permillage. There will be 36,000 hospital beds in the entire municipality in 1995, 2,700 more than in 1990, or 3.9 beds per thousand people. By 2000, there will be 41,000 hospital beds, or 4.2 beds per thousand people.

We must continue to organize extensive sports events of a mass nature, accelerate athletic development to

improve the caliber of the people, build a diving center and a host of sports arenas, and build a sports center.

## VII. Economic Structural Reform

### 1) Basic Reform Principles

—We must adhere to the socialist reform direction and stick to the basic theory and basic practice of building socialism with Chinese characteristics, and fully bring out the superiority of the socialist system.

—We must implement the principle of combining economic planning with market regulation. Through comprehensive coordinated reform involving the three links—enterprise, market, and macroeconomic regulation and control, we need to gradually sort out and regularize some basic economic relations, particularly the relations between state, enterprise, and individual. We should further mobilize the initiative of all quarters, particularly those of the grassroots and masses.

—We must proceed from the reality in Tianjin, push ahead steadily and vigorously, coordinate measures, and adapt our actions to local conditions. We need to offer individual guidance, emphasize practical results and find a way that suits the conditions in Tianjin.

—We must closely integrate reform with the open policy. We should actively adjust production relationships so that they revolve around the demands of developing an export-oriented economy, and gradually build up a system and mechanism suited to the development of an export-oriented economy.

—We must further liberate our thinking, explore new ground, and keep forging ahead. We must pick up the pace of reform while handling the relations between reform and stability properly, push ahead with reform amid stability, and use reform to help promote stability.

### 2) The Main Objectives of Reform

The overall goal is as follows: Go all out to create within five years or slightly longer the rudiments of the institutions and mechanisms which can make the most of Tianjin as an urban center and which are required by the development of an export-oriented economy. Such mechanisms should help expedite the adjustment of the economic structure and scientific and technical progress, and improve economic results, so that by 2000 a planned socialist commodity economy will be in place, the domestic and international markets will be linked to each other, and the planned economy and market regulation will be integrated. The specific objectives are:

—Revitalize enterprises, particularly large- and medium-sized enterprises owned by the whole people. Change the operating mechanisms so that the enterprise enjoys decision-making authority in its operations, assumes responsibility for its own profits and losses, and is capable of self-development and self-restraint, gradually forming a variety of ways to bring about public ownership.

- We should develop other economic forms as appropriate within an economy dominated by public ownership, to dovetail with the state of productive forces in the initial stage of socialism. In particular, we should make use of those economic forms in developing the tertiary industry while stepping up our guidance and management.
- Basically sort out price relations. Rectify the "dual-track system." Establish a rational price-setting mechanism. The prices of most commodities should be set by the market. Some commodity prices should match their counterparts on the international market.
- Improve the market system. Perfect market regulations. Set up a relatively advanced financial market and commodity market. Strengthen Tianjin's position as an open, multi-functional financial center and modern port city.
- Establish a social security system, especially a means of taking care of the aged, putting people in jobs, providing medical care.
- Change government's economic management functions, reform the method of management, and establish a local macroeconomic regulation and control system.

### 3) Major Reforms in Eighth Five-Year Plan

#### a) Enterprise reform

The invigoration of enterprises, particularly large- and medium-sized state-owned enterprises, lies at the heart of economic structural reform. The basic requirements of enterprise reform are as follows: We must improve the operating mechanism, optimize the organizational structure, establish a sound enterprise progress mechanism, and create a largely level playing field on which enterprises can compete. During the Eighth Five-Year Plan, we must implement the Enterprise Law in earnest, continue to improve the enterprise contract system, and conduct pilot projects in "separating profits and taxes, after-tax loan repayments, and after-tax contracting." This can pave the way for finally establishing an enterprise system that has a flexible mechanism and a high margin of profit, sets great store by adding value to assets, and that is basically suited to competition in the international marketplace.

—We must improve enterprise mechanisms in batches at different times using an array of approaches. Even as we improve the contract system and perfect the incentive mechanism and restraint mechanism, we should select some large- and medium-sized enterprises as the sites of experimental reform of a ground-breaking nature. New enterprises and workshops should follow new practices based on the new operating mechanism. We ought to conduct a pilot project in the shareholding system and explore new operating methods.

—We must deepen internal enterprise reform and integrate such reform with the improvement of management. We need to improve the enterprise's internal management system, further overcome egalitarianism, and smash the "one big pot." We ought to gradually institute a wage system that reflects all round the quality as well as quantity of the labor force, improve the enterprise's hiring system, and apply the contract system to all workers.

—We must actively develop enterprise groups, particularly inter-sector, inter-regional, and multi-function enterprise groups and those that are driven by name-brand products or a dominant enterprise. This will be in order to expedite structural adjustment, optimize resource allocation, raise the level of socialization and specialization, obtain economies of scale and comprehensive social benefits, and enhance our ability to compete on the international and domestic markets.

—We must create a playing field for enterprise competition that is largely level. We need to gradually unify enterprise income tax rates in accordance with the principle of tax simplification and tax equity based on the national plan. We also have to reform the enterprise financial management system, including the depreciation system and cost control system.

—We must tighten the management of state properties, and do a good job in inventorying state assets and defining property rights. We should explore and establish a state property management system and methods compatible with the socialist planned commodity economy.

#### b) Price reform

We must establish a sound price-formation mechanism and management system, and gradually sort out price ratios between all kinds of commodities. In accordance with the central plan of the state, we have to adjust the prices of key capital goods and abolish the dual-track pricing system for certain capital goods on a case-by-case basis. When it comes to the usual processed goods with considerable supply and demand elasticity where supply and demand are largely in balance, durable consumer goods, and daily non-necessities, we should gradually deregulate prices and let the market regulate them. The procurement prices of grain and oil are high but their selling prices are low. That should be changed. We must further sort out the procurement and selling prices of vegetables and nonstaple food items and cut back on government subsidies. Even as we adjust the prices of daily necessities, we should take steps to avoid affecting the lives of the majority of people.

#### c) Market circulation reform

We must further improve the consumer goods market and expand the capital goods market. We need to develop a variety of market organizational forms and methods of trading, improve intermediate market services, and organize inter-regional, comprehensive, or

specialized circulation enterprise groups. We have to push for industry-commerce integration, develop joint operation and joint selling, and put together wholesale groups that combine production and marketing on a trial basis. We must establish all sorts of capital goods markets including a financial market, technology market, information market, real estate market, and labor market. We need to promote their maturing and improve their institutions.

We must draw up rules and regulations for the markets and standardize market trading behavior, perfect market supervision and organization, improve market management, and establish a socialist market order.

**d) Social security reform**

The pension system for elderly workers, the unemployment system, and the health care system should be gradually reformed. In accordance with the principle of combining social mutual help with self-protection, we should reform the various insurance systems. Workers should come under different elderly insurance programs depending on whether they work in state-owned enterprises, collective enterprises, enterprises funded by the "three capital sources," or private enterprises, or are self-employed individuals in the townships. The waiting-for-job insurance for urban workers should be expanded and improved. We must concentrate on solving the unemployment insurance problems of workers made redundant by enterprise closings and those made redundant when an old enterprise becomes part of a joint venture. This should be accomplished in conjunction with labor management, the development of a variety of operational methods, the organization of job-related training, and the development of a labor market, both in planning and in implementation. We need to diligently work out a medical insurance scheme suitable for Tianjin.

**e) Housing reform**

We must proceed with housing reform surely but steadily in accordance with the ability of the state, enterprise, and worker to cope economically. The way public housing is rented and distributed must be improved, and rent increases and subsidies phased in. We should encourage individuals to buy or build houses. In accordance with the principle of the three parties—state, collective, and individual—sharing the burden fairly, we should take various steps to set up a housing construction fund to expedite the commercialization of housing. We can mobilize the enthusiasm of all quarters to accelerate housing construction and improve the citizens' housing conditions.

**f) The reform of the labor and wage system**

We must gradually establish a labor and employment system that utilizes Tianjin's labor resources rationally and increases productivity. We should establish a mechanism that regulates, controls, and increases wages, and steadily but surely introduce an enterprise employment

system that applies contract management to all employees and uses a variety of hiring methods. In wage reform, we should continue to improve pegging the total payroll of an enterprise to its margin of profit. We need to phase in the job-skills wage system as the dominant internal distribution system. Party and government organs, institutions, and units should gradually create a wage system in line with their own respective characteristics. The mix of wages and incomes should be adjusted by decreasing distribution in kind and converting a portion of the subsidies of a welfare nature into the basic wages. In conjunction with reform in price subsidies, housing, and the health care system, we should modify the inequities of social distribution by rigorously collecting personal income taxes through a personal income report system.

**g) The reform of the local economic regulatory and control system**

In accordance with the demand of combining the planned economy with market regulation, we should gradually create a macroeconomic regulatory and control system based on state planning that features a combination of economic, legal, and administrative means. We need to establish a new national business accounting system whose main component is the GNP. The focus of planning work should shift to the forecasting, planning, guidance, regulation, and control of society-wide economic activities. The current practice of deciding which agency should examine and approve a project according to the latter's production capacity and amount of investment should be changed. We should gradually phase in the double entry budgeting system, and overhaul the economic management functions of the government, shifting from direct management to indirect management and concentrating on doing a good job in planning, coordination, service, and supervision. We need to strengthen and improve management by departments in charge of auditing, statistics, prices, labor and wages, taxation, information, technical supervision, and industrial and commercial administration, and continue to reform the district and neighborhood system.

**VIII. Construction of the Socialist Spiritual Civilization**

The construction of an advanced socialist spiritual civilization is both an objective of our struggle and an important guarantee of the construction of the material civilization. To achieve the strategic objectives of Phase 2 of Tianjin's economic development, we must redouble our effort to construct a socialist spiritual civilization guided by Marxism-Leninism and Mao Zedong Thought. We must ensure the healthy progress of reform, the open policy, and economic construction, and expedite all round social progress even as we push ahead with the construction of a material civilization.

**1) Ideological and Moral Construction**

We must publicize the party's basic line in depth on a long-term basis, and conduct an educational campaign in upholding the four cardinal principles and opposing

bourgeois liberalization. We need to use highly effective propaganda methods that are lively and interesting, hit the nail on the head, and are highly effective. This will enable the party's basic line—"one center, two basic points"—to take hold in the hearts of the people and become the ideological and political core shared by all citizens.

We must step up propaganda and education centered on economic construction and adhere strictly to reform and the open policy. We should instil in cadres and the masses the concept of a socialist commodity economy and enhance their consciousness of reform and the open policy. We need to continue to conduct in-depth education in patriotism, collectivism, and socialism; nurture socialist citizens who have ideals, morals, culture, and discipline; and fire up the spirit of nationalism. We should launch universal national defense education to intensify their sense of national defense, and intensify the construction of the militia and reserves. The vast numbers of cadres and masses, particularly young workers and students, should be educated in modern history, socialist history, and basic national circumstances. We must expand education in public spiritedness, professional ethics, and family ethics to form good habits in society such as honoring the elderly, helping the young, aiding people in danger or in distress, taking up the cudgels for a just cause, or deriving pleasure from helping others.

We must continue to organize a broad range of activities of learning from Lei Feng, Jiao Yulu, and Lai Ning [6351 1337], as well as from model workers, advanced personalities, models by one's side on all fronts. We should put into effect the "Regulations for Tianjin Citizens" so that an individual becomes a civilized citizen in society, a civilized worker in his unit, and a civilized member of his family. Activities aimed at creating civilized units should be continued, so that the military and civilians, cadres and masses, police and citizens, and factories and neighborhoods can work together.

We must continue in depth the "three-excellence" activities aimed at creating an excellent environment, establishing an excellent order, and effecting excellent services. We ought to launch an extensive and in-depth educational campaign to foster a belief in science, oppose feudal superstition, and change prevailing habits and customs.

Using various approaches, leaders at all levels, particularly leading cadres, should be organized to study basic Marxist theories revolving around the topic of building socialism with Chinese characteristics and in light of the realities in economic construction, reform, and the open policy in order to make them more conscientious, principled, systematic, far-sighted, and creative in their work, and increase their ability to recognize things and solve problems using the Marxist stand, viewpoint, and method.

We must continue to promote honesty in government and closer ties between the government and the people. We should redouble our effort to rectify and firmly correct unhealthy trends in departments and trades, unwaveringly combat all sorts of phenomena that violate the law and discipline, and put forward practical ideas to achieve honesty in government. We need to set up a honesty government system to ensure the smooth progress of economic construction, reform, and the open policy.

## 2) Cultural Development

In arts and literature, we must adhere to the direction of "serving the people and serving socialism" and the principle of "letting a hundred flowers blossom and a hundred schools of thought contend." Writers and artists should be encouraged to study Marxism-Leninism and Mao Zedong Thought in earnest and enthusiastically derive nourishment from life to improve the quality of their creations. A host of outstanding works and outstanding people must emerge from among literature, drama, art, music, dance, folk art forms, movies, and television to further the nation's fine culture.

Libraries, museums, archives, and cultural undertakings must expand their purview and increase the number of people they benefit. We must work hard to improve the level and quality of services; contribute to reform, economic construction, the open policy, and scientific research, and serve the masses. We should launch a broad and diverse range of mass cultural and sporting activities and scientific popularization activities that are healthy and interesting. We have to consolidate and further the achievements of country culture, enterprise culture, country culture, family culture, campus culture, and barracks culture. A number of mass cultural facilities should be built and remodeled and other existing ones expanded.

Radio and television should steadily increase their ability to produce radio or television shows, strive to improve their quality, and diversify their contents in order to satisfy the highly diverse needs of their listeners and viewers. We should fully utilize the newly built radio and television station to achieve even better social and economic benefits.

The press and the media should go all out to publicize the party's line, principles, and policies, and steadfastly adhere to the principle of concentrating on positive propaganda. We must shape public opinion correctly. In the next decade we must put out a set of newspapers that meet the needs of modernization, reform, and the open policy. We have to improve layout and printing conditions, make newspapers more informative, raise the quality of propaganda and reporting across the board, and step up propaganda overseas to make Tianjin better-known abroad.

The publishing sector must firmly put social benefits above everything else, improve the quality of the corps of publishing workers as well as the quality of their

publications, and try mightily to put out a host of books and magazines with major national influence. It should update and modernize printing technology and equipment, reduce the publishing turnover time, and revitalize publishing.

### 3) Social Democratic and Legal Development

We must adhere to and improve the people's congress system, multi-party cooperation under CPC leadership, and the CPPCC system. The process of making decision-making democratic and scientific should be promoted. We need to further improve the workers' representative assembly system and such practices as leaders at all levels having heart-to-heart talks, offering services, and doing things for the grassroots. We have to expedite legal development and put local law-making and supervision on a sound footing in earnest. The second five-year plan in legal propaganda and education should be implemented extensively and in depth. Citizens' sense of legality and legal-mindedness should be enhanced. We must press ahead with doing things strictly in accordance with the law and putting every undertaking on a legal track gradually.

We should uphold the people's democratic dictatorship, and further intensify public security and political and legal work closely centered on social stability and economic construction. We have to continue to crack down on serious crimes, conduct focused special campaigns, mount a long-term, in-depth struggle against economic crimes dominated by corruption and bribery, and punish egregious economic criminals severely. We have to mobilize and rely on social forces in all quarters to tackle crime together. A variety of approaches must be used to ensure comprehensive law and order in society. We should increase preventive capabilities, combat "pornography" and the "six evils" unremittingly, strictly prohibit ugly social phenomena, and handle all social contradictions properly. We must eliminate hidden elements of instability without delay, maintain social law and order, and redouble our effort to improve the public security, legal, and political departments. We have to improve technology and equipment endlessly to enhance fighting capability overall.

The objectives and tasks laid down in the 10-year plan and Eighth Five-Year Plan are both magnificent and arduous. But they are achievable provided we work hard. Cadres at all levels must adhere to the party's ideological line of "seeking truth from facts" and further liberate their thinking to give themselves a truly new set of ideas. Instead of a product economy, they must now think in terms of a planned commodity economy. Instead of being mainly domestically-oriented, the economy must now be primarily export-oriented. Instead of relying mainly on extensive expanded reproduction, we should now rely on intensive expanded reproduction fueled by progress in science and technology. We must launch an in-depth campaign to increase output and incomes while

economizing and cutting back on expenses. Party leadership should be further strengthened. We should bring to the fore our political superiority and mobilize all positive elements.

We must consolidate and develop the excellent situation of stability and unity. We have to continue to adhere to the basic work philosophy of "doing everything for the people and relying on the people in everything." The entire citizenry must be mobilized and organized, and everyone united. We must rouse ourselves with inspiration, be of one heart and one mind, and quietly immerse ourselves in hard work. We must work mightily for the revitalization of Tianjin and the achievement of all the tasks in the plans.

### Tianjin Statistical Communiqué (Part One)

SK2307134291 Tianjin TIANJIN RIBAO in Chinese  
5 Jun 91 p 6

[Statistical communiqué on the 1990 national economic and social development of Tianjin Municipality, issued by the Tianjin Municipal Statistics Bureau]

[Text] The year 1990 was a year for further improving the economic environment, rectifying the economic order, and deepening reform, and a year in which we came across many difficulties in the course of economic development. During the past year, under the correct leadership of the party committee and the municipal government, the people across the municipality actively implemented the municipal party committee's demand to "keep our eyes on stability while doing everything, and change difficulties into opportunities"; strived to promote economic improvement and rectification and the deepening of reforms; unceasingly overcame difficulties while advancing; and made noticeable achievements. Industrial production rebounded steadily, agricultural production developed comprehensively, and new progress was made in urban construction. The markets gradually became brisker, the scope of opening up was further expanded, the increase in commodity prices declined noticeably, the people's livelihoods improved continuously, and the entire national economy developed in a good direction. New achievements were made in all undertakings, including in the areas of education, science, technology, culture, public health, and sports. Based on initial statistics, in 1990 the municipality's GNP was 30.03 billion yuan, an increase of 2.5 percent over 1989; the national income was 24.41 billion yuan, an increase of 1.6 percent; and the gross value of industrial and agricultural output was 76.935 billion yuan, an increase of 7.8 percent. The major problems in the course of economic performance were: contradictions in the industrial structure remained prominent; the economic cycle was not smooth; economic efficiency declined; and difficulties in shortages of finance and funds were aggravated.

**I. Industry**

Industrial production began to pick up steadily. In 1990, the municipality's industrial production faced problems of market sluggishness, shortages of funds, and enterprises operating below capacity. The industrial sector climbed up the slope amid difficulties during the first quarter of the year. The municipal party committee and the municipal government promptly held a mobilization rally on increasing production, practicing economy, increasing revenues and reducing expenditures. This enhanced spirit, strengthened production management during the second quarter, gradually ended the downward trend in production, and enabled industry to continuously and steadily pick up during the third quarter. It also yielded beneficial results in the fourth quarter along with the gradual implementation of the central measures for invigorating the economy and municipal measures for promoting industrial sales and increasing production. A trend of comprehensive growth in industrial production, sales, and efficiency was seen throughout the municipality. During the year, the municipality's gross value of industrial output [GVIO] reached 71.729 billion yuan, up 7.8 percent over 1989, surpassing the planned growth target. Of this, the gross output value of industrial enterprises at and above the township level reached 57.631 billion yuan, an increase of 3.7 percent over 1989. Of the output value of industrial units at and above the township level, the output value of state-owned enterprises totaled 43.047 billion yuan, a decline of 0.7 percent from 1989; the output value of collective enterprises totaled 10.785 billion yuan, an increase of 7.5 percent (of this, the gross output value of township industrial enterprises reached 5.806 billion yuan, up 31.7 percent); the GVIO of other economic sectors reached 3.799 billion yuan, an increase of 40.1 percent. Of this, the output value of "three kinds of wholly or partially foreign-owned" enterprises rose by 50.3 percent.

The completed light industrial output value of the municipality in 1990 was 37.29 billion yuan, an increase of 5.3 percent over 1989; the output value of heavy industry totaled 34.44 billion yuan, an increase of 11.2 percent over 1989. The production of export commodities increased continuously. The annual output value of export products was 7.049 billion yuan, an increase of 25.6 percent over 1989.

Continuous progress was made in readjusting the product mix. The trial manufacturing and production of new products was better than in any previous year. In 1990, the municipality carried out trial production of 1,805 varieties of new products, an increase of 52 varieties over 1989. It also carried out trial production of 30,300 new varieties with new specifications, designs, and packages, an increase of 713 varieties over 1989. A total of 1,219 varieties of new products, and 16,000 varieties of new specifications, new designs and new packages were put into production during the year. The production rate reached 67.5 percent and 52.8 percent respectively. During the year, these new products created an output value of 2.736 billion yuan, up 29.0 percent over 1989. Their share of the GVIO rose from 5.7

percent in 1989 to 7.1 percent. Product quality was newly improved. The rate of output value of industrial fine-quality products across the municipality increased from 40.9 percent in 1989 to 46.6 percent in 1990. The municipality's 688 industrial products have individually won international, national, and ministry-level prizes for their fine quality over the past years. Of these prize-winning products, six won international prizes; 18 won national prizes, including five that won gold medals and 13 that won silver medals. Of 319 key products appraised by the municipal authorities, 310 were proved as being stably upgraded in their quality targets and their rate of being stably upgraded reached 97.16 percent, an increase of 4.16 percentage points over the demand set in the annual plan. With regard to the output of key products, output of basic raw materials showed a sustained increase, and output of high-class durable consumer goods and of a number of products with the special investment declined somewhat, due to the restriction of market demands.

The output of major industrial products is as follows:

Item	Unit	1990	Increase over 1989 (%)
Natural gas	100 million cubic-meters	3.67	-2.4
Crude oil	10,000 tons	469.5	-0.2
Power output	100 million kwh	94.85	-1.8
Pig iron	10,000 tons	139.52	29
Steel	10,000 tons	166.74	10
Steel products	10,000 tons	178.73	1.9
Cement	10,000 tons	122.14	-4.5
Soda ash	10,000 tons	68.71	2.8
Caustic soda	10,000 tons	25.23	1.3
Raw salt	10,000 tons	172.28	-20.5
Machine-made paper & paper-board	10,000 tons	26.75	-5.5
Fertilizers	10,000 tons	7.21	-7.4
Agrochemicals	10,000 tons	1.79	12.9
Plastics	10,000 tons	11.67	9
Dyestuffs	10,000 tons	2.1	12.9
Chemical medicines	10,000 tons	0.18	-14.3
Chemical fiber	10,000 tons	7.47	2.8
Synthetic detergents	10,000 tons	8.54	16
Machine tools	1	940	-33.4
Motor vehicles	1	27,000	-31.7
Tractors	1	9,515	-46.6
Yarns (mixed)	10,000 tons	11.69	3.5
Cloth (mixed)	100 million meters	4.92	17.9
Wool fabrics	10,000 meters	1322.3	-11.9

Item	Unit	1990	Increase over 1989 (%)
Cigarettes	10,000 cartons	28	-12.5
Watches	10,000	524.43	7.9
Household washing-machines	10,000	33.4	-9.1
Household refrigerators	10,000	23.34	-42.2
Television sets	10,000	143.93	4.4
Color sets	10,000	62.46	9
Recorders	10,000	19.2	30.8
Bicycles	10,000	536.69	-13.8

In 1990 the municipality further consolidated or improved the existing measures and policies on reforms and maintained the continuity of enforcing the policy on reforms. In coping with the problems cropping up in the enforcement of responsibility systems, the municipality readjusted or improved in a timely manner the periods, targets, and forms of contracts and directly enforced responsibility systems among the 14 key and large- or medium-sized enterprises. It established responsibility systems for business and auditing affairs and for managerial methods which enterprises use for their internal distribution and personnel promotions and awards. Thus it dealt with the problems in which enterprises' internal distribution was not fair and the incomes of specific managers were excessively high. The municipality also adopted the method of renting the 200 enterprises that lose little money to outside units, inviting bids for improving their production, or of encouraging other enterprises to sign contracts with them to improve their production. As a result, the profits earned by the 200 enterprises in the year were obviously higher than those earned by other enterprises. New

achievements were scored in the activities to upgrade enterprises. In 1990, 302 enterprises throughout the municipality were approved as municipal-level advanced enterprises after appraisals. Two of them (the telecommunications and broadcasting company and the wrist-watch plant) were upgraded to the level of first-grade state enterprise, and 57 were approved as second-grade state enterprises. From 1987 to 1990, 835 enterprises throughout the municipality entered the rank of advanced enterprises (403 of these were industrial enterprises). Two of them were ranked as first-grade state enterprises and 186 were ranked second-grade state enterprises (143 of them were industrial enterprises).

## II. Agriculture

Farming, forestry, animal husbandry, sideline production, and fisheries showed comprehensive development in 1990, thanks to strengthened party and government leadership over agricultural production, increased investment, and favorable weather conditions. The annual gross value of agricultural output was 5.206 billion yuan, up 7.4 percent from 1989. Of this, the output value from farming came to 2.688 billion yuan, up 5.6 percent, and that of forestry, animal husbandry, sideline production, and fisheries grew by 11.9, 7.4, 14.5, and 5.2 percent respectively.

Bumper grain harvests were reaped for seven years in a row and a new record in grain production was achieved again. The municipality's 1990 grain output was 1.888 billion kg, up 11.2 percent from 1989, and the per-mu yield rose from 249 kg in 1989 to 275 kg, up 7.0 percent. Good harvests were achieved in cotton and oil-bearing crops and the production of major nonstaple foods, such as meat, eggs, vegetables, milk and aquatic products, showed a substantial increase. As a result, urban and rural market supplies were satisfactory.

The output of major farm and sideline products is as follows:

Item	unit	1990	Increase over 1989 (%)
Grain output	100 million kgs	18.88	11.2
Summer grain	100 million kgs	6.47	13.0
Autumn grain	100 million kgs	12.40	10.2
Cotton	10,000 tons	1.53	39.7
Oil-bearing crops	10,000 tons	4.68	5.8
Fruits	10,000 tons	10.10	-1.8
Vegetables	10,000 tons	268.14	2.9
Meat	10,000 tons	11.89	10.7
pork	10,000 tons	8.97	11.0
Beef and mutton	10,000 tons	1.22	15.2
Poultry and eggs	10,000 tons	18.64	6.9
Milk	10,000 tons	7.61	12.6
Aquatic products	10,000 tons	10.83	4.4
Fresh-water products	10,000 tons	7.21	9.4
Year-end figure of pigs in stock	10,000 head	78.97	-7.5
Productive sows	10,000 head	8.4	-6.8
Pigs slaughtered	10,000 head	123.7	10.2

Conditions for agricultural production were further improved. The municipality's expenditures used in agriculture totaled 189.08 million yuan in 1990, up 12.3 percent from 1989, and the agricultural loans issued by monetary organizations showed an increase of 39.2 percent over 1989. In the year, 44.72 million cubic meters of earth and stone work were completed for farmland water conservancy projects, showing an increase of 97.9 percent over 1989. A total of 300,000 mu of low- and medium-yield farmland was transformed and 110,000 mu of wasteland was reclaimed. By the end of 1990, farm-machine power totaled 4.39 billion watts, up 2.3 percent from the end of 1989, and the numbers of small and hand tractors and trucks for farm use rose by 8.1 and 5.3 percent respectively over 1989. Eighty percent of the wheat fields suitable for mechanized farming were sown and harvested by machines. The annual amount of chemical fertilizer applied totaled 410,000 tons, up 3.8 percent from 1989, and the average per-mu amount of chemical fertilizer applied rose from 61 kg in 1989 to 63 kg. Rural electricity consumption totaled 1.65 billion kilowatt hours, up 7.1 percent from 1989, and machine-farmed acreage totaled 5.985 million mu, up 0.5 percent. Effective irrigated acreage increased by 1.1 percent from 1989.

The rural economy was constantly developed. In 1990, the total production of rural society in the municipality was valued at 27.698 billion yuan, an increase of 18.4 percent over 1989. Of this, the output value of rural industries and the construction, transportation, commercial and catering industries increased 21.9 percent over 1989. The proportion of output value of these industries to the total rural output value rose from 77.9 percent in 1989 to 80.2 percent.

Rural reforms unceasingly deepened. In 1990, on the basis of unceasingly improving the household contract responsibility system, the rural areas in the municipality actively promoted the supporting reform of socialized service, effectively increased the accumulation of labor forces, strengthened the building of the social service system, further improved the dual management system combining centralized and decentralized management, and unceasingly developed and expanded the collective economy. The nonstaple food bases, including poultry, eggs, lean-meat pork, and aquatic products breeding basically carried out large-scale production. The optimize-scale farming areas were rapidly expanded and reached more than 1.7 million mu, an increase of 36 percent over 1989.

### III. Investment in Fixed Assets and the Construction Industry

Investment in fixed assets rebounded. In 1990, the completed investment in fixed assets of the whole municipality was 8.769 billion yuan, an increase of 4.5 percent over 1989. Of this, investment in state-owned units reached 7.218 billion yuan, up 5.5 percent; investment in collective units reached 1.056 billion yuan, up

37.5 percent; and investment by individuals in the urban and rural areas reached 495 million yuan, a decline of 36.6 percent.

In 1990, the municipality's local social investment in fixed assets totaled 5.747 billion yuan and was controlled within the prescribed scope of the state, an increase of 6.9 percent over 1989. Of this, investment in the capital construction projects of state-owned units was 1.951 billion yuan, an increase of 9.5 percent over 1989; and investment in equipment replacement and technical updating reached 1.968 billion yuan, an increase of 0.3 percent.

The investment structure improved continuously. Of the investment in the municipality's state-owned units, investment in productive projects reached 5.819 billion yuan, an increase of 11.8 percent over 1989; and investment in non-productive projects reached 1.399 billion yuan, a decline of 14.4 percent. The agricultural, energy, basic raw material, transport, post and telecommunications departments were further strengthened. Of the investment in the municipality's state-owned units in 1990, investment in agriculture reached 191 million yuan, up 41.7 percent over 1989; investment in energy was 2.667 billion yuan, up 7.2 percent; investment in basic raw materials was 854 million yuan, up 27.9 percent; investment in communications, post, and telecommunications was 838 million yuan, up 8.9 percent; and investment in education, culture, radio, and television was 221 million yuan, up 6.3 percent. The proportion of investments by the aforementioned five departments to the total investments of state-owned units rose from 62.4 percent in 1989 to 65.1 percent.

Key construction projects were further strengthened. In 1990, the whole municipality built 82 key projects involving a total investment of 3.725 billion yuan, up 17.2 percent over 1989. This accounted for 51.6 percent of investment in state-owned units, an increase of 5.1 percentage points over 1989, fulfilling the annual plan. During the year, 19 projects were completed and commissioned. The construction of the television tower was basically completed and the new channel began broadcasting. The new building of the Tianjin library was completed and the new library's volume of book storage represented an increase of nearly 100 percent over that of the old library. The construction of the Tianjin section of the Beijing-Tianjin-Tanggu expressway and the project to improve the Tianjin airport were completed ahead of schedule, and efforts were made to put them into operation before the Asian Games. The renovation of the Liqizhuang-Dagang Railway and the widening of the Beijing-Tianjin Highway, and the construction of the number 3 power-generating unit of the Dagang Power Plant, the five bulk-cargo wharves of the Tianjin port, the urban telephone network project, the six deep-water berths on Dongtudi in Tianjin port, the Dagang Flour Plant, the Hualian commercial building, the Nanlou commercial center, and the Longtan swimming area were all completed on schedule.

In 1990, an additional 4.966 billion yuan worth of fixed assets were built by state-owned units throughout the municipality, a decline of 1.5 percent from 1989. Of this,

an additional 2.675 billion yuan worth of fixed assets were built by the industrial sector, a decline of 14.4 percent. The availability rate of fixed assets was 68.8 percent, a decline of 4.9 percentage points from 1989; the availability rate of construction projects was 61.7 percent, up 3.8 percentage point over 1989; the rate of completed housing areas was 50.0 percent, a decline of 2.1 percentage points. In 1990, the output value of the municipal construction industry totaled 3.170 billion yuan, a drop of 2.0 percent from 1989; the per-capita labor productivity was 15,874 yuan, an increase of 5.5 percent.

#### IV. Transportation, Posts, and Telecommunications

The volume of cargo handled by various means of transportation in 1990 was 209 million tons, an increase of 0.9 percent over 1989, and the transportation departments handled 167.683 billion ton-km of goods, an increase of 18.4 percent.

Volumes of cargo handled by various means of transportation were as follows:

Means of transport	Unit	1990	Increase over 1989 (%)
Railway	10,000 tons	7,178.7	-2.4
Highway	10,000 tons	12,328.7	7.9
Waterway	10,000 tons	978.6	2.0
Oceangoing	10,000 tons	912.7	2.8
Air	10,000 tons	0.17	-19.0
Oil pipeline	10,000 tons	326.1	-7.2

Volumes of goods handled by various means of transportation were as follows:

Means of transport	Unit	1990	Increase over 1989 (%)
Railway	100 million ton/km	783.1	2.0
Highway	100 million ton/km	52.15	23.4
Waterway	100 million ton/km	840.83	11.9
Oceangoing	100 million ton/km	837.3	12.0
Air	10,000 ton/km	272	-15.8
Pipeline	100 million ton/km	0.72	-68.0

The volume of passengers handled by railways was 32.30 million people, a drop of 16.4 percent from 1989; civil aviation handled 60,300 people, a drop of 9.5 percent; and long-distance highways handled 415,000 people, a drop of 16.3 percent.

The port's loading and unloading capacity was reduced. The loading and unloading capacity of Tianjin harbor in 1990 totaled 20.633 million tons, a drop of 15.3 percent.

Of this, the export volume was 11.954 million tons, a drop of 10.9 percent; and the import volume was 8.679 million tons, a drop of 20.8 percent.

Posts and telecommunications continued to develop at a fairly rapid speed. Transactions of postal business totalled 71 million yuan, an increase of 22.5 percent, and transactions of telecommunications business totaled 256 million yuan, an increase of 30.1 percent. By the end of 1990 the municipality's installed telephone switchboard capacity totaled 227,200 lines. Of this, the installed telephone switchboard capacity of the municipal telephone bureau was 197,000 lines, a drop of 0.5 percent from 1989. This was due to the fact that some outdated installations were eliminated. The proportion of program-controlled telephones in the municipality's installed telephone capacity rose from 69.3 percent to 70 percent. The number of telephone subscribers in urban areas at year's end totaled 147,600, an increase of 23.4 percent over the same period in 1989. There were 3.62 telephones per 100 urban residents, an increase of 15.3 percent. Of this, there were 6.18 telephones per 100 suburban district residents, a rise of 15.5 percent.

#### V. Domestic Market and Prices

Domestic market sales were gradually becoming normal from prior sluggishness, and the supply of commodities was ample. In 1990, the total volume of retail sales was 14.936 billion yuan, an increase of 3.3 percent over 1989, or an actual increase of 0.6 percent if inflation is taken into account. Of this, the total volume of retail sales dropped by 2.8 percent in the first quarter and by 1.0 percent in the second quarter; in the third quarter the volume rose by 2.5 percent and by 15.3 percent in the fourth quarter. The market tended to be basically normal. Of the total retail sales volume, the volume of consumer goods was 13.988 billion yuan, an increase of 4.2 percent. Of this volume, the goods sold to residents was 12.111 billion yuan, an increase of 3.2 percent; the goods sold to social institutions was 1.877 billion yuan, an increase of 10.8 percent. The retail sales volume of the means of agricultural production was 947 million yuan, an increase of 7.4 percent. The retail sales volume of units owned by the whole people increased by 4.7 percent; that of the collectively owned units dropped by 4.2 percent; and that of individually owned units increased by 8.0 percent. The volume of urban retail sales increased by 5.0 percent, and that at the county level or below dropped by 6.7 percent. This shows that the rural market did not reach a normal level.

When viewed from the marketing situation of commodities of various categories, in 1990 the retail sales volume of food was 5.585 billion yuan, an increase of 4.4 percent over 1989; that of clothes was 2.405 billion yuan, an increase of 2.4 percent; and that of daily necessities was 5.783 billion yuan, an increase of 4.3 percent. Respectively, these showed an increase of 1.7 percent, a reduction of 0.3 percent, and an increase of 2.7 percent over 1989, if inflation is taken into account.

Affected by slumping market sales, the scale of purchases and marketing of commercial departments was narrowed, and commodities transferred to places other than the municipality decreased. In 1990, the total value of commodities purchased by commercial departments in the municipality was 14.902 billion yuan, a drop of 1.0 percent from 1989. The total value of sales was 17.7 billion yuan, an increase of 1.3 percent, and the total value of commodities transferred to other places was 90.42 billion yuan, a drop of 11.9 percent.

In 1990, the increase in the margin of the general retail price level narrowed obviously. The general retail price level of consumer goods rose by 2.7 percent over 1989, a drop of 12.4 percentage point compared to 1989, with its the margin of increase the lowest since 1985. Characteristics of the 1990 retail prices were as follows: Prices in various quarters were relatively stable. In the fourth quarter, the municipality readjusted the prices of coal, coal gas, chimneys, stoves, and sugar; however, this did not have a great influence on prices. When viewed from the price level of commodities of various categories, food prices rose by 1 percent; clothes prices rose by 10.6 percent; daily necessities prices rose by 4.3 percent; prices of cultural and recreational appliances dropped by 4.2 percent; prices of books, newspapers, and magazines rose by 2.9 percent; prices of medicine and medical appliances dropped by 4.2 percent; and fuel prices rose by 6.5 percent. The general price level of living expenses of employees in 1990 rose by 3 percent, 11.7 percentage points lower than the scale of increase scale in 1989.

#### VI. Foreign Economic Relations and Trade, and Tourism

Foreign export trade set a record high. In 1990, the municipality's total value of exported commodities was \$1.786 billion, an increase of 5.9 percent over 1989. This fulfilled the annual state-assigned export quota of \$1.56 billion by 114.5 percent. Of this, exports of machinery and electronics products totalled \$419 million, up 15.7 percent over 1989. In 1990, total commodities purchased for export throughout the municipality equalled 4.35 billion yuan (planned price), an increase of 17.9 percent over 1989.

In 1990, the total value of imports and exports of Tianjin customs houses was \$8.595 billion, a drop of 19.1 percent compared to 1989. Of this, the total value of exports was \$4.253 billion, an increase of 7.1 percent; and that of imports was \$4.342 billion, a drop of 34.8 percent.

#### FINANCE, BANKING

##### Shanghai Foreign Exchange Market Increases 48 Percent

OW0408090091 Beijing XINHUA in English  
0745 GMT 4 Aug 91

[Text] Beijing, August 4 (XINHUA)—The Shanghai foreign exchange regulation market has seen brisk business this year, according to the local newspaper WEN HUIBAO.

The foreign exchange handled by the Shanghai foreign exchange regulation center totalled 1.37 billion U.S. dollars in the first seven months of this year, a 48 percent increase over the same period last year. The monthly business value exceeded 400 million U.S. dollars for the first time in July.

The increase was attributed to a sufficient supply of commodity foreign exchange. Since the foreign trade system was reformed, enterprises have more foreign exchange to handle independently. Thus they can put the hard currency on the market.

The foreign exchange center has adopted pricing levers to stimulate demand and attract foreign exchange purchasing enterprises from across the country.

Prices on the foreign exchange market have been comparatively stable. The difference between the maximum and minimum price to buy one U.S dollar was 0.12 yuan in the first seven months.

#### Cash Expenditures by Urban Residents Jan-Jun 1991

HK0708104391 Beijing CEI Database in English  
7 Aug 91

[Text] Beijing (CEI)—Following is a list showing the average monthly cash expenditure of urban residents in the first half of 1991 and that in the same period of 1990 released by the State Statistical Bureau:

		(Per capita expenditure in RMB yuan)
Expenditure	1-6/91	1-6/90
Total	119.47	103.53
Expenditure on commodities	107.64	94.05
of which:		
Food	63.53	57.47
Clothing	17.78	6.96
Daily necessities	11.84	8.75
Stationery and recreation articles	6.47	13.84
Books and newspapers	0.88	10.24
Medicines	1.99	5.96
Fuel	1.82	0.76
Housing	1.97	1.49
Others	1.40	1.37
Noncommodity expenditure	11.83	9.48
including:		
Rent	0.81	0.77
Water and electricity	1.77	1.44
Gas	0.36	0.19
Transport	1.34	1.04
Postage	0.21	0.14

		(Per capita expenditure in RMB yuan)
Medical care	0.58	0.44
Tuition	2.12	1.85
Nursery	0.58	0.56
Entertainment	0.46	0.31
Repairing and service	2.46	1.90
Others	1.17	0.93

## FOREIGN TRADE, INVESTMENT

### Shanghai's Exports During First 5 Months

91CE0659A *Shanghai JIEFANG RIBAO* in Chinese  
5 Jun 91 p 1

[Article by Jiang Xinhe (5592 1800 0735): "Report on Shanghai's Exports in First Five Months"]

[Text] Foreign trade enterprises in Shanghai have abandoned the traditional operational system of "eating from the same big pot" in which the state's financial departments resumed responsibility for enterprises' losses and profits, and in an all-round way, spread the new system in which enterprises resume the responsibility for their own losses and profits. Practice in the first five months this year indicates that the new system played a positive promotive role in enhancing enterprises' vitality, improving business management, and developing foreign trade business. According to statistics, between January and May this year, the accumulated export products in Shanghai were 2.336 billion dollars, an increase of 13.6 percent over the same period last year.

For several decades, most foreign trade enterprises in Shanghai relied on "eating from the same big pot" in which the state was responsible for losses and profits. As long as the export targets were met, all other enterprise problems would be removed. After the State Council decided to implement the new system nationwide for foreign trade enterprises assuming responsibility for their own losses and profits this year, foreign trade enterprises in Shanghai, one after another, intensified enterprise management, perfected business mechanisms, paid attention to raising export efficiency, and enhanced enterprise competition. As the main force in Shanghai to earn foreign exchange through exports, all the specialized companies in foreign trade adopted many methods. They assigned economic targets level by level, strictly controlled the scale of loans, reduced stocks, cut down expenditures, optimized export product structures, adjusted export regions and markets, and increased work efficiency. Within a short time, export costs for many commodities were reduced. The costs of most commodities run by the Third Business Department of the Shanghai Local Products Export and Import Company were higher than the set targets. To reduce costs and increase exports, they intensified marketing survey.

When they learned of market changes for sweet potatoes, they immediately contacted businessmen and made a deal of 60,000 tons.

After foreign trade enterprises assumed responsibility for losses and profits, workers and staffs started to establish the sense of survival and the sense of crisis. Their intelligence and wisdom were also brought into play. Within the departments in the Shanghai Medicine and Health Care Import and Export Company, everybody calculated costs and cared about the fund spendings and returns. In the past, few people visited the company's finance section, now it has become a popular place.

Unexpectedly after implementing the new system in which foreign trade enterprises are responsible for losses and profits, supplies of low quality or high cost goods, which were accepted without any difficulties in the past and based on personal connections, are now rejected. Because responsibility for enterprises' own losses and profits is closely related to workers and staffs' own interests, thus all the procedures in business are strictly checked. Though some people privately made complaints, they could do nothing to change the overall situation. In the past, some workers and staff in the Shanghai Machinery Import and Export Company, often interceded with the company's leaders to accept supplies based on personal connections. But since the beginning of this year, such cases have not occurred. In the Shanghai Hardware and Mineral Products Import and Export Company, there have emerged "two manys" and "three fews" phenomena. Two manys refers to refusing gifts, and seeking good relations with all at the expense of principles. Three fews refers to few complaints, fewer cases in which every department of the company engaged in sideline production, and fewer parties.

After abolishing the old system in which the state assumed all the responsibility for enterprises' losses and profits, although foreign trade enterprises in Shanghai have met many difficulties, the new system in which enterprises are responsible for their own losses and profits still promoted foreign trade development. For example, from January to May, foreign exchange earnings in Shanghai rose compared with the same period last year. Export costs, fund spending and expense levels, and commodity stock were all lower than 1990. Some enterprises which incurred losses in the past have reduced losses compared with the same period last year.

## ECONOMIC ZONES

### Shenzhen Progresses in Science, Technology

91CE0629A *Shenzhen SHENZHEN TEQU BAO* in Chinese 20 Jun 91 pp 1, 2

[Article by the Office of the Municipal Party Committee and the Research Team of the Municipal Science Commission: "Ten Years of Progress in Science in the Shenzhen Special Economic Zone"]

[Text] Our success in building the Shenzhen Special Economic Zone is due first of all to the program of

reform and opening up. This fact is known to all and universally acknowledged.

The development of the Special Economic Zone (SEZ) has also depended on scientific and technological progress. Not everyone has clearly understood this point, however.

In reality, the first ten years of the Shenzhen SEZ has been a time of reform and opening up, and a time of scientific and technological progress. The Shenzhen SEZ has been transformed from a backward border town into the modern city we find today, with tall buildings everywhere, economic prosperity, and an excellent investment climate. This is an historical change. Science and technology, like some fabulous magician, have played an enormous role in this change.

As a window to the outside world and as a proving grounds for China's reforms, the Shenzhen SEZ has attempted many bold new things in an effort to achieve an organic synthesis of economic development and scientific and technological progress. It has gradually carved out its own path. The construction and development of the Shenzhen SEZ has proven that science and technology is the number one productive force.

#### **I. The Objective of Imports Has Been To Improve Science and Technology and To Lay a Solid Foundation for Manufacturing Technology.**

In order to set up an SEZ and open it up to the outside world, the first task has been to import needed items. What is the objective of imports? Our understanding of this question deepens continuously as the SEZ develops.

In accordance with the requirements of the Central Committee and actual local conditions, the municipal party committee and the municipal government long ago clearly laid out a policy of relying upon scientific and technological progress and economic development. They have introduced the development strategy of "improving quality and efficiency." They have actively readjusted policy to reduce the number of projects involving processing of regular materials or which only involved common technology, and instead placed the focus of import activities upon the acquisition of high and new technologies and appropriate advanced technologies, enabling import activities to take place at a relatively high level. We have quickly imported a body of technology, equipment, and scientific management experience on a par with advanced domestic standards, and even advanced international standards. We have developed a group of high and new technology enterprises centered around information technology, new materials, and biotechnology. This has formed a relatively advanced base of manufacturing technology that has been focused upon industry. In the last ten years, Shenzhen has imported more than 700 key technology projects, of which 20 percent are high and new technology and 80 percent of which are appropriate advanced technology, and set up 33 different industries, including electronics, machinery, textiles, and light

industry. In the past ten years, the comprehensive technology level index for the entire city risen by an average of 12 percent per year, labor productivity of the entire body of industrial workers has risen from 8,190 yuan in 1979 to 71,500 yuan in 1990, and scientific and technological progress has accounted for about 30 percent of industrial growth. A group of key enterprises with a relatively advanced level of technology has appeared. Shekou Science and Technology Development Corporation imported disk head production technology in 1985. Its foreign partners invested their knowledge of markets, technology, and enterprise management, and the company was established with an investment of \$2 million. It has sold 170 million US dollars worth of products on the international market in 5 years, achieved net foreign exchange earnings of \$37 million, and become the third largest manufacturer of disk heads in the world. It is listed by the Ministry of Machine Building and Electronics as the largest exporter among all computer enterprises in China.

At the same time that our city has been importing advanced foreign technology and equipment, it has also actively urged enterprises to assimilate new technology and to work to achieve innovations, thereby achieving the ability to export products and technology. For example, the color television, stereo, and telephone industries have imported technology and become quite proficient at improving these products very quickly. These products have maintained a leading position for several years in China and have become some of the bigger export items for our country. Shenzhen's Qiongjiao Industries Corporation imported a chali [STC unknown, 5070] fruit production line and used is to build four more of its chali fruit production lines. This company has also used its production lines and the value of its technologies to gain a foothold in the economically and technically advanced United States, setting up the Xinghua Foods Corporation, a joint venture with a foreign firm. This is the first firm from Shenzhen to use its own technology and equipment to invest in an enterprise abroad.

#### **II. Tapping the Advantages of the Shenzhen SEZ, Relying Upon the Scientific and Technological Strength of the Inland Provinces, and Accelerating Commercialization of Scientific and Technological Advances**

Developing an outwardly oriented economy is the glorious mission conferred upon Shenzhen by history. Intense competition in international markets and the galloping progress of science and technology have presented us with a stern challenge. If we are to develop an outwardly oriented economy, we must hold our own in the international marketplace. We cannot have success without advanced technology and without rapidly turning scientific and technological advances into commodities. However, Shenzhen started off with a very weak technological base. We will never be able to gain a foothold in the international marketplace, where scientific and technological progress is proceeding at such a

rapid pace, by relying solely upon its own means. We must find a method of scientific and technological development which is appropriate to the needs of our SEZ. We must guide ourselves by the international marketplace, rely upon the research strength of scientific organs in the inland provinces, take full advantage of scientific advances achieved inland, take advantage of the relatively flexible SEZ industrial structure and its relatively advanced commodity economy, focus our attention upon secondary development, work to strengthen the ability of the SEZ to develop science and technology, and begin to form a network that will link up our technology markets and the secondary development of superior technical advances achieved inland.

This path will provide ample opportunity for a large number of highly talented scientific and technological personnel to take advantage of their skills. Over the past ten years, Shenzhen has used a variety of methods to bring in more than 100,000 technical experts from inland provinces, establishing a body of scientists and technological experts that is beginning to grow quite numerous. A foundation has been laid that will enable scientific and technological progress to continue in the SEZ.

This course of action has provided a new outlet for scientific breakthroughs achieved in the inland provinces. By the end of last year, a total of more than 30 key universities and 110 research institutes under the jurisdiction of various ministries and provinces had come into Shenzhen to establish more than 200 research/production joint entities of various types. These research/production joint entities have attracted a number of top flight scientific and technological personnel to Shenzhen at the same time as they have brought in a number of advanced technological breakthroughs and accelerated the transformation of scientific advances into commodities achieved in the inland provinces. For example, the Nanfang Pharmaceuticals Plant, which was set up by the Military Hospital No. 1, brought a number of its products, including Stomach Medicine No. 39, to Shenzhen, where it has carried out secondary development and begun large scale production of these products. Total output value last year was 380 million yuan, and significant economic benefits have been yielded.

In addition, this course of action has also provided the highly developed national defense industrial enterprises with an arena in which to take advantage of their strength in the areas of personnel, technology, equipment, and funding. Statistics indicate that by the end of last year, national defense industrial enterprises had either jointly or individually established 400 enterprises in Shenzhen, 120 of which boast considerable technological and economic strength. The list of such enterprises includes Zhonghang [0022 2635], Guangyu [1639 1342], Zhenhua [2182 5478], Beifang [0554 2455], Aihua [1947 5478], Huada [5478 6671], Zhongdian [0022 7193], and Zhongji [0022 2623; full company names not supplied].

High and new technology enterprise groups in the inland provinces have also set up a number of bases for the development and export of high and new technology products here in Shenzhen, this window on the outside world. In recent years, a number of well known high and new technology enterprise groups from the inland provinces have established a presence in Shenzhen and effectively strengthened the SEZ's ability to develop and produce products with high technology or new technology. The list of such companies includes Great Wall, Lianxiang [5114 1927], Changjiang [7022 3068], Stone, Langchao [3186 3390], Xinchao [2450 3390], and Taiji [1132 2817]. For example, China's largest computer enterprise group—Great Wall Computer Group, has established the Great Wall Group (Shenzhen) Corporation here in Shenzhen. It produced a total of 41,349 personal computers and 56,169 monitors, achieved a total industrial output value of 1.235 million yuan, turned over 73.46 million yuan in profit taxes, and earned \$21.49 million in foreign exchange between June 1988 when it began production and the end of 1990. This combination of inland high technology with the advantages offered by Shenzhen immediately demonstrated great promise for future development.

After several years of hard work, we have tentatively established a technology link involving inland research, Shenzhen development, and product exports. Practice has proven that this type of linkage is very effective. It has injected great vitality into research and production activities in Shenzhen, and it has strengthened the competitiveness of SEZ products in the world marketplace.

### III. Reforming the Science and Technology System; Establishing an Integrated System of Scientific Research and Production Centered Upon the Enterprise

“Scientific research and production have nothing to do with each other.” This idea has long fettered the development of our science and technology. In laying the scientific and technological foundation for the SEZ, the municipal party committee and the municipal government have paid ample attention to this problem and determined to reform the old system, in which scientific research and production had nothing to do with each other. While working to establish a mechanism which closely integrates science and technology with the economy, and promoting scientific and technological progress in enterprises, the party and the government will vigorously experiment and fully take advantage of the central role played by the applied technology and product development that goes on in enterprises. In order to achieve this, the municipal party committee and the municipal government have adopted a series of measures.

1. They have reformed the science and technology appropriations system and readjusted science and technology investment policy. They have established agencies to invest in science and technology, including the Municipal Science and Technology Development Foundation, the New Technology Business Startup Foundation, and

the New Product Technology Development and Promotion Foundation. They have set up a program of science and technology development loans, and 80 percent of government loans for science and technology are being directed toward enterprises.

2. They are helping enterprises to establish scientific research organs within their factories, and they are building a new system of scientific and technological development that is centered upon the enterprise. Currently, 62 enterprise-type independent scientific research organs have been established, and seven institution-type organs of scientific research have adopted enterprise style management. Of the 78 large- and medium-sized industrial enterprises throughout the municipality, 39 have established independent technological development organs, and 134 new products were developed last year. Many enterprises which have not established independent scientific research organs have established their own departments for the development of products, technologies, and engineering. The establishment by enterprises of science and technology development organs has laid an important organizational foundation for the close integration of science and technology with the economy and the promotion of scientific and technological progress in enterprises.

3. They have formulated concessionary policies, and have encouraged enterprises to raise their own science and technology development funds. In recent years, Shenzhen has formulated many policies to encourage enterprises to raise their own funds for the development of new products and technologies. They have asked regular enterprises to take 1 percent of their sales volume and high and new technology enterprises to take 3 to 5 percent of their total sales volume and use it for technology development. They have also offered tax concessions and favorable loan repayment conditions. By last year, enterprises in Shenzhen had raised more than 100 million yuan for technology development, of which 26.456 million yuan have been used for the development of new products.

A new SEZ scientific and technological development system which is centered upon the enterprise and in which science and technology are integrated with production is now gradually forming. The enthusiasm of enterprises for developing new products and technologies is growing greater every day. Enterprises in Shenzhen have developed more than 300 new products every year since 1987, and these products have accounted for a growing percentage of increased output value in the years in which they have been introduced. They accounted for 700 million yuan in increased output value last year.

#### **IV. Aggressively Setting Up Science and Technology Enterprises; Promoting Scientific and Technological Progress on Many Levels and in Many Areas**

Another way in which Shenzhen has relied upon scientific and technological progress and promoted economic

development has been to fully bring into play the supplementary and competitive mechanism of private involvement in science and technology, promote personnel movement and the development of high and new technology enterprises, and reinvigorate markets for technology products in the SEZ. In 1987, the Municipal Party Committee and the Municipal Government formulated policies which would encourage workers in science and technology to establish private scientific and technological enterprises. These policies also support the efforts of workers in science and technology to raise their own funds, find their own partners, run their businesses with autonomy, take responsibility for their own profits and losses, and set up private scientific and technological enterprises in which technology, industry, and trade are integrated. The party and the government have gone about promoting the development of private scientific and technological enterprises in an aggressive yet stable manner.

By the end of last year there were 134 private science and technology enterprises throughout the city, and they had achieved a number of high and new technology advances which had won 17 international prizes, three national prizes, and 39 prizes at the ministerial or provincial level. Private science and technology enterprises last year achieved 130 million yuan in industrial output value. Output value exceeded 10 million yuan for three firms and 1 million yuan for 17 firms. In addition, we have set up 18 private science and technology enterprises which serve as the Chinese partner in joint ventures, and they have achieved 46.44 million yuan in output value and have earned 20.26 million yuan in foreign exchange. For example, Shenzhen Jiecheng Electronics Corporation imported and then upgraded technology from the U.S. company, K/W Systems Engineering Corporation, and successfully developed and produced a fully transistorized high power continuous power source. Exports of this product last year earned \$15.8 million in foreign exchange, an average of almost \$40,000 per employee.

The development of private science and technology enterprises has provided valuable experience in our efforts to rely upon scientific and technological progress to promote economic development in the SEZ, deepen reform of the science and technology system, and promote integration of science and technology with the economy.

#### **V. Developing High and New Technology Industries; Relying Upon Scientific and Technological Progress to Improve Industrial Structure and Optimize Product Mix**

If we are to create "Shenzhen benefits," and if we are to achieve the economic goals which we have set for the next ten years here in the SEZ, we must make up our minds to set up a number of high and new technology enterprises capable of representing the level of science and technology present here in Shenzhen. Doing so would be an important sign that the economy in the SEZ here is moving toward a new level. Leadership groups in

the Municipal Party Committee and the Municipal Government have taken a relatively long range view of this issue, and they have devoted a great deal of enthusiasm and hard work to achieve this goal:

- They have formulated a strategy and a program for scientific and technological development, and have settled upon a development strategy for high and new technology enterprises. As early as 1988 they formulated a ten-year scientific and technological development program and the Eighth Five-Year Plan, in which the strategy of developing high and new technology industries in order to spur improvement of industrial structure and creating "Shenzhen benefits" was introduced. They began official implementation of these plans in September 1990. They have also promulgated the "Methods for Implementing the Shenzhen Municipal Short-Range Industrial Policy." A fundamental principle guiding the readjustment of industrial policy is to give top priority to developing high and new technology industry.
- They have formulated a series of concessionary policies to encourage the development of high and new technology industries. Such measures include special consideration in the inspection and approval of projects, investment and credit, taxes, land use, the supply of commercial buildings, the supply of water and electricity, the transfer of household registration for employees, and trips to Hong Kong and abroad. Policies that would facilitate the development of high and new technology industries have been put in place.
- They have aggressively opened up high and new technology development zones, thereby optimizing the physical environment for high and new technology industries. In 1985, we worked together with the Chinese Academy of Sciences to establish China's first science, technology, and industrial park.
- The Shenzhen Science, Technology, and Industrial Park to date has attracted more than 50 high and new technology enterprises. Shenzhen has gone on to set up the Saige High Tech Industrial Zone and the Huangjintai Science and Technology Business Startup Village, which have set up a number of high and new technology enterprises. We are now carrying out a new program, working together with the Ministry of Machine Building and Electronics to set up a national computer software development and export zone. The plan is to make Shenzhen become the main software export base in China by the end of the Eighth Five-Year Plan. In addition, we have extended various special considerations and conveniences to high and new technology enterprises in the duty-free zones of Shatoujiao and Futian in order to attract high and new technology enterprises into these zones.

Shenzhen has established a number of enterprises engaged in the development and production of high and new technology products. We have developed a number of high and new technology products which are very

competitive in the marketplace, and Shenzhen has become a major base in southern China for the development and export of computers, microelectronic products, digital communications products, optic fiber cables, laser disks, liquid display devices, numerically controlled equipment, medical equipment, new materials used in information sciences, vaccines, biological reagents, and food additives.

Shenzhen Kejian Corporation and Shenzhen Changyuan Applied Chemical Technologies Corporation have recently been included on a list of the nine top science and technology firms in Guangdong Province. Kejian Corporation and the joint venture enterprise affiliated with it, Anke High Tech Corporation, have successfully developed the Kangfa series of CAE workstations, a nuclear magnetic resonance imaging system for medical use, and color Doppler B.

Output value is 232,000 yuan per employee, and each employee has generated an average of 66,500 yuan in profit taxes.

As we enter into the 1990's and the Shenzhen SEZ continues to take shape, the city will enter upon a new phase of development. For the Shenzhen SEZ, the new conditions represent an opportunity as well as a new challenge and test. If Shenzhen is to achieve the national economic goal of growing twofold by the end of the century, the fundamental means by which to achieve this is to rely upon scientific and technological progress. Therefore, we must fully tap Shenzhen's advantage as a proving grounds for reform and opening up and as a window upon the outside world. We must make a conscious effort to guide economic construction toward reliance upon scientific and technological progress. On the one hand, we must: continue to vigorously bring in appropriate advanced technology from other parts of China and from abroad; accelerate the construction of a new scientific and technological development system which is centered upon the enterprise, in which science and technology are integrated with production; and bring about the gradual formation of a mechanism which combines scientific research, import activities, innovation, technology promotion, and application. In addition, we must work hard to import high and new technologies, to develop a number of high and new technology products, and cultivate a number of high and new technology industries. We must vigorously promote the development of the outwardly oriented economy in the Shenzhen SEZ, and continually carry forward with construction of the SEZ!

## AGRICULTURE

### Analysis of Support for Grain Market Reform

91CE0562A Beijing ZHONGGUO NONGCUN JINGJI  
[CHINA'S RURAL ECONOMY] in Chinese No 4,  
20 Apr 91 pp 10-15

[Article by Deng Yiming (6772 0001 7686) of the Rural Development Research Institute of the Chinese

Academy of Social Sciences: "A Tentative Plan for the Reform of the Grain Marketing System and the Analysis of the Investigation of Citizens Support"]

[Text] Currently the central and local governments are concerned about reform of the grain procurement and marketing system. Departments and commissions concerned at the central level and local government organs at all levels are vigorously exploring the reform plan. Judged from the progress of the reform, many provinces and municipalities have suppressed grain sales for non-agricultural use, excluding urban grain rations, and achieved good results without causing major problems. However reform of grain rations for urban residents is considered a forbidden zone, and nobody dares touch it. To break down this barrier in the reform of grain procurement and marketing, we proposed the reform plan of "two-level advance and two-step completion" for the sales of grain to urban residents. To prove this reform plan, we cooperated with the Policy and Regulations Department of the Ministry of Agriculture in carrying out an investigation of 1,579 urban households of different income levels, occupations, and age groups in five large cities—Xian, Guangzhou, Shenyang, Wuhan, and Beijing—between June and August 1990. The findings show that the majority of urban residents support the reform plan. Our tentative plan for the reform and the analysis of the investigation are as follows:

### I. Objective of Reform

The objective of the reform of urban resident grain marketing system is to exercise market regulation under state regulation and control. Namely, it is to guarantee grain supply but not prices, decontrol grain prices, and give target subsidy to low-income households. To achieve this objective, we must adopt the strategy of "two-level advance and two-step completion." Because:

1. Establishing a grain marketing system that is regulated by the market under the state regulation and control requires a series of conditions. First we should carry out reform of "separating ownership from management and government administration from enterprise management" in enterprises which supply and market urban grain to enable such enterprises to really become independent legal persons who have decision-making power in management, assume sole responsibility for profits and losses, and carry out market-oriented operations. Second we should establish a market system for urban grain procurement and marketing and perfect market organizations. Third we should establish a set of state regulation and control systems to stabilize grain prices and protect consumers' interests. These conditions are not available at the present.

2. Due to the force of inertia, the old urban residents' grain supply and marketing system needs to be continued for some time. "Applying brakes suddenly" will inevitably cause shocks and confusions. It is more appropriate to adopt the measure of "soft landing."

3. Currently urban residents cannot yet accept the decontrol of grain prices. There should be a process of gradual adaptation. The two-step approach is conducive to softening urban residents' negative attitude caused by the increase of grain price and increasing their mental bearing capacity.

The above restricting conditions determine that the reform cannot be completed in one step for the span of one step is too great. However it is not appropriate either to take too many steps for it would extend the period of reform and increase the difficulty of reform. A better approach is the two-step march. Namely, the first step is to allow a transitional period for us to switch from the traditional grain marketing system to the objective model and to vigorously prepare for the conditions of such a switch. The second step is to change from the transitional period to the objective model after all conditions are ripe.

### II. Enforcement Plan for the Reform of "Two-level Advance and Two-step Completion"

A. First-level advance: "the reform of quantitative regulation."

This is to use the administrative means of quantitative regulation to achieve the "balance of control" in the procurement and sales prices and the supply and marketing quantity of grain. Concrete measures are:

1. Reduce the grain quota of urban residents.
2. Link the procurement price to the sales price of urban residents' grain and allow the sales price to rise faster than the procurement price. This measure enables us to even out the procurement and sales prices in two steps. The price rise will fall on urban residents and those with low income will be subsidized.
3. Implement the policy of improving the quality of grain and decontrol the price of quality grain.
4. Replace grain coupons with grain coupon books and gradually eliminate old grain coupons by redeeming them in different stages. The grain quotas in the grain coupon books should be used up in the same month or in two months. They become invalid after the expiration date.
5. Exercise strict control over agricultural population transferring to nonagricultural occupations. We guarantee their grain supply but not grain prices. We supply them grain at market prices.

The abovementioned five reform measures may be carried out simultaneously.

B. Analysis of the investigation of urban residents' support for the above reform measures.

1. The degree of urban residents' support for the reform measure of reducing monthly grain quota.

First of all, the amount of grain actually consumed by urban residents is decreasing. According to a summary of the investigation of 1,579 households, the average monthly grain quota per household is 95.3 jin. The average amount of grain actually consumed per month is 84.67 jin per household and 24.0 jin per capita. The average monthly surplus is 10.63 jin per household and 3.0 jin per capita. Cutting the quota by three to five jin will not have a great effect on urban residents. With urban residents' income increasing, the grain quota should be reduced continuously.

Second, we obtain the following results from the summary of the inquiries (see Table 1):

Table 1 shows that the average rate of support for the reduction of grain quota by three or more jin is as high as 63.52 percent and the rate of disapproval is 36.48 percent. The support rates of groups divided by occupation, age, monthly per-capita income, and region (except for Shaanxi) all exceed 50 percent. Among them, the support rate of people with more than 180 yuan of per-capita monthly income is over 70 percent and that of individual commercial households is over 80 percent. The disapproval rate of low-income residents and impoverished areas is higher. The disapproval rate of people with less than 100 yuan of per-capita monthly income reaches 47.65 percent and that of Shaanxi Province reaches 76 percent.

This shows that appropriately reducing the grain quota of urban residents is basically feasible. The problem of low-income residents or impoverished areas may be resolved through the measure of subsidy grain.

## 2. The degree of urban residents' support for the sales price increase of grain.

We suggest that we even out the procurement and sales prices of grain through two price adjustments. The reasons: First, the per-capita grain expense accounts for a very small portion of living expense. The investigation of 1,579 households shows that per-capita monthly grain expense is 8.2 yuan, accounting for 5.7 percent of per-capita monthly income and 6.3 percent of per-capita monthly living expense. Second, after the two price adjustments, per-capita monthly grain expense will increase only a couple of yuan. In 1988 urban market grain price was 0.556 yuan per jin and the state price of grain was 0.252 yuan. If the price is raised 0.15 yuan per jin each time, per-capita monthly grain is 24 jin which will cost at most 6.3 yuan. If the price is raised again, it will reach the market price and per-capita grain expense will be 7.2 yuan, which is fully bearable to urban residents. The rate of support of urban residents for the price increase of grain is shown in table 2.

First, the rate of support for the rate of price increase. Table 2 shows that the majority of urban residents approve the increase of grain sales price. Regarding the rate of price increase, 87.2 percent of urban residents approve moderate and slight increases. People preferring slight increase account for 49.7 percent, the highest of

the three categories of attitude. Among the groups divided by occupations, as much as 34.4 percent of individual commercial households "do not care" one way or another about the price increase of grain and a fairly high percentage of this category of people also approve "moderate or substantial increase." Among the groups divided by per-capita monthly income, high-income households favor substantial price increase.

Second, the rate of support for the acceptance of grain price increase. The inquiries show that 54.1 percent can accept and that 40.8 percent cannot. Among the groups divided by occupations, the percentage of cadres who "can accept" is the highest, which is 62.3 percent. The second highest is cultural and educational workers, about 57.4 percent. Among the groups divided by age, the percentage of acceptance increases as the year of age increases. Among the groups divided by income levels, the percentage of people who "can accept" also increases as per-capita monthly income increases.

In sum, as urban residents' income increases, appropriately increasing the sales price of grain and having urban residents bear the full brunt of price increase is basically feasible and can gain the support of most urban residents. But a considerable number of people maintain that hidden subsidies should be changed to open subsidies, namely increasing the amount of subsidy for urban residents as the sales price of grain increases and allowing the amount of open subsidy to be included in enterprises' cost or administrative and operational expenses. This is the same as paying money to buy the reform or going around in circles, then pushing the burden of grain price increase back to the state treasury. This kind of reform is meaningless. We are against "turning hidden subsidies into open subsidies." The problem of low-income households may be resolved by applying to their work units for financial aids.

## 3. The policy of improving the quality of grain should be implemented immediately.

In the 1960's, urban residents' grain was distributed according to the system of low-price sales and supply by coupon. Judged by the living conditions at the time when grain was scarce, urban residents' income was very low, and all they wanted was something to eat and keep warm, such a system was necessary. But after urban residents' income increased substantially and the survival problem was resolved, the consumption of grain changed from the quantitative type to the qualitative type. Besides, the gap between the income levels of urban residents has also been enlarged. The past quantitative-type, even-quality grain supply and marketing system is very unsuitable for current urban residents' income situation and changes in consumption demand.

The investigation shows that urban residents' demand for quality grain is generally very high. First, a large number of households buy a large amount of quality grain from the market. According to the investigation of 1,579 households, as many as 691 households, 43.8

percent, buy quality grain from the market; the total amount of grain purchased is 1,805 jin, averaging 2.6 jin per household per month. Second, a large amount of grain shop grain has been used to trade for quality grain. As urban residents' income and the ratio of nonstaple food consumption increase, the consumption of grain continues to decline, and urban residents have saved up a large number of grain coupons. Some grain coupons are used to trade for other commodities or given away to relatives and friends, others are used to buy from grain shops ordinary grain which is then traded for quality grain. The survey shows that 362 households, 22.9 percent, have done so. Each year they use on the average of 154,000 jin grain shop grain to trade for 102,000 jin of quality rice. The exchange rate is 1:0.66. They also use 978.3 jin of grain shop grain to trade for 698 jin of quality flour. The exchange rate is 1:0.71. Table 3 shows that as urban residents' income level rises, the demand for quality grain increases gradually.

With urban residents' income rising, future demand for quality grain will increase rapidly. Lifting the price control of quality grain can encourage farmers to produce more quality grain to narrow the gap between supply and demand and satisfy urban residents' demand for quality grain. It also can reduce the state's financial subsidies. It can kill three birds with one stone. What is there against it!

D. The degree of support for the reform measures of "replacing grain coupons with grain coupon books, redeeming surplus grain coupons in different stages, and limiting the sales of grain to one or two months worth of coupons."

Issuing grain coupons is a temporary egalitarianian distribution method we were forced to adopt under the situation of extreme grain shortage. Now not only grain can fully satisfy demand but urban residents hold a large number of grain coupons. Due to the difference between state and market prices, these grain coupons have been turned into negotiable securities with circulative function. They have become a negative factor that interrupts monetary and grain markets. According to the comprehensive results of the investigation of 1,579 households, on the average every household holds 80.1 jin of grain coupons. Regarding the method of disposal of grain coupons, urban residents' responses are listed in table 4.

According to table 4, the choice of policy regarding the disposal of surplus grain coupons should be the method of "redeeming in different stages without invalidation" because the rate of support for this method is as high as 60.2 percent. As for the limit of sales to one or two months worth of grain, the three responses each account for about one third, so the choice of policy is not obvious. If we consider "no opinion" as "approval," then the rate of support for the limit of sales to one or two months worth of grain will be 61.9 percent, which is barely acceptable.

E. The feasibility analysis of the policy of guaranteeing grain supply but not the prices for those who transfer from agricultural to nonagricultural jobs and of the policy of supplying grain at market prices.

The increase of state grain price subsidy is caused largely by the increase of nonagricultural population in urban areas. Between 1979 and 1989 the net increase of nonagricultural population averaged 6.247 million a year. Of this, 3.949 million are people transferred from agricultural to nonagricultural jobs (the number of people transferred from non-agricultural to agricultural jobs has been deducted), accounting for 63.2 percent of the net increase of nonagricultural population. In other words, the increase of state subsidy has been granted mostly for people who have transferred from agricultural to nonagricultural jobs. If we adopt new measures for new transfers from agricultural to nonagricultural jobs by abolishing the grain price subsidy and providing only the fixed quota, we may be able to basically stabilize the amount of state grain price subsidy. Implementing the policy of guaranteeing grain but not the price and providing grain at market price among the population transferred from agricultural to nonagricultural jobs is only one step ahead of original urban population. In the future we will implement this policy among all urban population. Since per-capita grain expense accounts for a very small portion of per-capita general living expense and since other treatment is the same as that of original urban population, this policy can be acceptable to the population transferred from agricultural to nonagricultural jobs.

3. Two-level advance: "The reform of market regulation."

This is to use such economic levers and means as price, credit, and tax to reach a market balance in the quantity and price of the supply and sales of grain of urban residents and enable the supply and the demand sides to determine grain price through market competition.

Along with the completion of the five reform measures in the first stage of the grain supply and marketing system and as market expands its role and scale everyday and exercises part of its regulatory functions, urban residents' fear for grain price increase is gradually disappearing and their bearing capacity for the reform is increasing. The even-quality characteristic of grain supply is gradually weakening and quality improvement is being strengthened. As income increases, the economic bearing capacity for the reform has also increased. These changes have laid a foundation for the second step of the reform. Because of this, we should seize the opportunity to push the second step of the reform.

A. Decontrol grain prices and allow grain supply and demand to be regulated by the market.

After the tasks of the first stage of reform is completed, we should first of all boldly introduce market mechanism in an all-round way. This is because in the first stage of reform urban residents' mental behavior toward price

reform was more closely linked to market relations. The survey of 1,579 urban residents shows that urban residents' support for the decontrol of grain price is fairly high. If we consider "no opinion" as support for grain price decontrol, then the number of support for the "decontrol of grain price" is as high as 51.9 percent (see table 5).

**B. Open up urban grain sales market and push urban state-run grain enterprises to market-oriented management.**

The construction of urban grain sales market should be started in the first-stage reform of "quantitative regulation." After entering the second stage, the planned urban grain sales market should be completed in its initial form and start operation. Otherwise, when grain price is decontrolled in the second stage, the measure of allowing grain supply and demand to be regulated by the market will fall through.

In the past 30 years urban state-run grain enterprises formed a stable wholesale and retail supply and distribution system under a highly centralized planning system. Accustomed to administrative control, enterprises' losses and the difference between the procurement and sales prices of grain were subsidized by the state. Trying to push state-run grain enterprises to the market, cut their ties to the government, make them assume responsibility for their own profits and losses and adopt their own decision in management is by no means an easy task. The state must be determined to carry out a thorough reform of urban state-run grain enterprises. Concrete reform measures are as follow:

First of all, we should clarify property relations between the state and the enterprise and manage grain enterprises as share-holding companies. The primary condition for grain enterprises to enter the market is to be able to operate independently and freely by using their own productive factors, to assume relevant responsibility and risk, and to rid themselves completely of the direct intervention from administrative organs. This demands that urban state-run grain enterprises clarify property relations with the state. One way to do this is to carry out the share-holding system of grain enterprises. The state may be allowed to hold or control shares, and enterprise management groups and enterprises' workers may also be allowed to hold shares. The highest decision-making organ of a grain enterprise should be the board of shareholders. As a shareholder, the state too can have only one vote.

Second, we should establish an urban grain market system. City grainaries may be used as major grain wholesellers, and grain stores scattered in urban areas may be retailers. We should allow urban residents to organize collective or individual businesses to sell grain, but they should be subjected to strict screening and supervision. We should also allow farmers to engage in the wholesale or retail business of grain in urban areas. If we fail to introduce new enterprises in urban areas,

original state-run enterprises will form a monopoly after entering the market, which is not good to market competition. Judged from international experience, to maintain market competition we must ensure the number of enterprises, control the merges of enterprises, and encourage new enterprises to enter the competition.

**C. Establish the macroeconomic regulation and control system of urban grain sales market**

Decontrolling grain price and pushing urban grain enterprises to market-oriented management by no means indicates the weakening of the planned economy and administrative intervention. On the contrary, we should strengthen the government's macroeconomic regulation and control over grain market to stabilize grain market price and protect consumers' interests. After urban grain enterprises and the state separate two powers and government administration from enterprise management, the government will withdraw from the direct management activities of grain. Grain bureaus which represent the government should concentrate energies on formulating and enforcing grain supply, marketing, transfer, and reserve plans; coordinating well all kinds of relations of market participants; formulating various rules and regulations for the grain market to ensure fair trade; and supervising grain market prices, setting grain price ceilings, and selling special state reserve grain when prices exceed the ceilings so as to reduce grain price. Under the grain bureau, we may establish a grain market management commission. As an agency of the grain bureau, this commission exercises direct supervision and control of the market. It may draw consumer and market sales representatives to join the organization so as to take care of the interests of all fields.

**D. Give target subsidy to urban residents**

After urban grain sales become market-oriented, the disparity price subsidy of the grain of urban residents may be changed from all-round subsidy to target subsidy. In other words, we may adopt two methods of subsidy: subsidizing low-income earners and general varieties of grain. First, regarding the subsidy of low-income earners, there is a problem of how to distinguish low-income earners. We suggest that we use the following methods: 1) The method of elimination. This is to eliminate the people enjoying the subsidy, such as individual commercial households and high-income levels in urban areas. 2) The age distinguishing method. This is to give subsidy to those below 18 and over 60 years of age who do not have a job. 3) The method of fixed ration. This is to provide subsidy on the basis of everyone's ration standards. Secondly, regarding the subsidy for the common variety of grain, we may subsidize such varieties as standard flour and machine-processed rice. High-quality grain is supplied at market prices.

The abovementioned reform of urban grain sales system should be carried out simultaneously with the overall reform of the national grain circulation system. It should

also coordinate with the reform of state macroeconomic system. It must not "charge forward alone." Only

through synchronized, coordinated, and cooperated movements can the reform achieve success.

Table 1. Analysis of 1,579 Residents' Support for Reduction of grain Quota

Item		For reduction of 3 jin	For reduction of 3-5 or more jin	Against reduction of fixed quota
Groups by Occupation	Cadres	55.69	8.18	36.13
	Workers	65.03	4.29	30.68
	Individual Commercial Households	50.0	31.24	18.76
	Cultural and Educational Workers	64.74	9.83	25.43
	Others	48.87	7.14	44.0
Groups by Age	Under 35	56.25	12.75	31.0
	Between 35 and 55	52.31	10.42	37.27
	Over 55	52.46	6.56	40.98
Groups by per-capita monthly income	Under 100 yuan	43.06	9.29	47.65
	Between 100 and 180 yuan	52.7	12.03	35.27
	Between 180 and 200 yuan	69.23	3.08	27.69
	Over 200 yuan	63.21	8.4	28.39
Groups by regions	Beijing	68.35	7.59	24.06
	Guangdong	65.34	10.23	24.43
	Liaoning	67.3	13.36	19.34
	Hubei	41.03	14.14	44.83
	Shaanxi	18.73	5.31	75.96
Average		53.32	10.2	36.48

Table 2. Survey of Sample Households' Opinions on Grain Price Increases

Items		Opinion on grain price increase			Added expense for grain per person per month		
		Moderate or substantial increase	Slight increase	No opinion	Can accept	Cannot accept	No opinion
Average		37.5	49.7	7.2	54.1	40.8	4.5
Groups by Occupation	Cadres	37.9	50.1	7.0	62.3	33.3	4.4
	Workers	36.2	53.7	4.3	53.1	42.3	3.7
	Individual commercial households	37.5	25.0	34.4	46.9	43.8	9.4
	Cultural and educational workers	34.7	56.7	2.3	57.4	37.6	3.5
	Others	38.0	48.5	9.4	59.8	34.6	5.6
Groups by age	Under 35	37.8	50.0	6.8	50.5	44.0	4.8
	Between 35-55	37	51	6.5	55.3	41.1	3.4
	Over 55	39.6	44.6	9.8	56.1	35.4	6.9
Groups by per-capita monthly income	Under 100 yuan	31.2	52.4	6.7	50.2	44.8	4.8
	Between 100 and 180 yuan	40.5	46.9	8.2	53.3	41.1	4.7
	Between 180 and 200 yuan	44.6	49.2	4.6	61.4	35.4	3.1
	Over 200 yuan	40.8	47.8	8.7	55.6	28.1	6.4

Table 2. Survey of Sample Households' Opinions on Grain Price Increases (Continued)

Items		Opinion on grain price increase			Added expense for grain per person per month		
		Moderate or substantial increase	Slight increase	No opinion	Can accept	Cannot accept	No opinion
Groups by region	Beijing	42.8	47.1	8.1	63	30.6	6.3
	Guangdong	30.2	58	3.4	48.3	45.5	3.4
	Liaoning	39.4	51.3	6.2	51.8	44.6	3.6
	Hubei	29.6	46.9	10.3	43.8	49.7	4.8
	Shaanxi	39.8	48.8	6.4	58.9	37.5	3.7

Note: Some inquiries are not filled out completely, so answers do not add up to 100 percent.

Table 3. Market Situation for High Quality Grain

Items	Unit	Average	Lowest income: under 60 yuan	Low income: 61-80 yuan	Lower middle income: 81-100 yuan	Middle income: 101-120 yuan	Higher middle income: 121-160 yuan	High income: 161-200 yuan	Highest income: over 200 yuan
Per-capita monthly grain expense	Yuan	8.2	5.8	6.1	6.9	7.2	8.2	9.4	11.8
Expense for buying quality grain from market	Yuan	1.5	0.8	1	1.2	1.3	1.5	1.9	2.6
Proportion of quality grain expense, total expense	Percent	18.3	13.8	16.4	17.4	18.1	18.3	20.2	22

Table 4. Survey of Sample Households' Opinion on the Disposal Method of Surplus Grain Coupons and Limits on Sales of Grain to One or Two Months

Items	Regarding surplus grain coupons and quotas			Regarding limits on sales of grain to one or two months		
	Invalidate completely or partially	Do not invalidate; redeem in stages	State buying off quotas	For	Against	No opinion
Support rate	6	60.2	31.4	33.4	37.3	28.2

Table 5. Urban Residents' Support for the Plan of grain Reform

Items	Reform plan					
	Reduce quota	Increase sales price without reducing quota	Increase sales price and reduce quota	Retain quota and decontrol sales price completely	Decontrol sales price completely without retaining quota	No opinion
Support rate	16.1	23.9	2.3	33.5	4.1	14.3

#### Ensuring Procurement Funds for Farm Products

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[Article by Li Zi (2621 6327): "Join Our Efforts To Ensure That Funds Are Managed Properly and Used Flexibly—the Issue of Procurement Funds for Farm and Sideline Products"]

[Excerpt] [passage omitted] It is feasible to put the procurement funds of farm and sideline products under special management.

China is a large agricultural country with a huge population. The issue of how to feed and clothe 1.1 billion people has always been a matter of prime importance to China. The party and the state have always given first priority to the issue of agricultural development. More important, the work of procuring farm and sideline products directly affects the immediate interests of 800 million peasants, has a great impact on peasants' lives and on the development of agricultural production, and plays a very important role in the stability of rural areas. Because of this, banks have always attached great importance to inputs to agricultural production and support

for the procurement of farm and sideline products. They have given priority to arranging funds for such purposes and provided favorable terms regarding interest rates. In spite of all this, since 1987 the phenomenon of writing IOU's has occurred in the procurement of farm and sideline products, affecting peasants' cash income.

In view of the above situation and in order to tighten the control of procurement funds for farm and sideline products, after summing up local experiences in managing the procurement funds of farm and sideline products, in the beginning of 1989 the headquarters of the People's Bank of China proposed a measure to put the procurement funds of farm and sideline products under special management. Two years of practice proves that this measure is effective. First of all, it defines the responsibilities of all departments and strengthens their sense of responsibility. All those which have been fairly conscientious in exercising the special management, such as Chongqing, Chengdu, Sichuan, Zunyi County in Guizhou, Henan, and Heilongjiang have basically prevented the problem of writing IOU's in the past two years. Conversely, those which have not been conscientious in this practice still suffer from the same problem of shortages of procurement funds.

Of course, the special management is just beginning. Now some localities have developed from special management to special-account management. This requires that procurement enterprises open a special account with a specialized bank and that the specialized bank open a special account with the People's Bank for deposits of procurement funds or loans for farm and sideline products. All procurement funds and payments from transfers and sales should be deposited and computed in the special account. Enforcement of the special-account management can effectively prevent the loss of procurement funds. As the measure of special management of procurement funds improves gradually, its role in the procurement of farm and sideline products will become more and more prominent.

**There is a problem of issuing IOU's during the procurement of farm and sideline products.**

Between 1987 and 1988, the phenomenon of issuing IOU's occurred on a fairly large scale in the procurement of farm and sideline products, causing concern for people in all fields. Under this condition, banks considered and tried all possible methods that were conducive to the procurement of farm and sideline products. In spite of this, responsibility still frequently falls on banks as soon as the IOU phenomenon occurs during the procurement of farm and sideline products. This is indeed not very fair. True, banks indeed have some problems with the supply of procurement funds. For instance, some local banks have problems regulating funds. In a few isolated cases some specialized banks even diverted procurement funds for other purposes and left open a "hard gap" in procurement funds for grain, cotton, and oil crops, thus forcing the Central Bank to

increase loans. Banks are of course responsible for problems like these, and they deserve the "blame." But we should not hold banks responsible for all cases of IOU's in procurements. Judging from the special management of procurement funds of the past two years, banks' money problems are not the main cause of shortages of procurement funds. The causes are listed as follows:

First, state financial departments fail to allocate on time and in full the amount of funds needed to make up for price increases and policy-related deficits. Second, some procurement enterprises fail to collect funds for procurement. Third, the IOU problem in the procurement of farm and sideline products is also caused by the increasingly serious contradiction between the supply of and demand for funds in China in recent years. Since payments for transfers and sales of farm and sideline products cannot be collected on time, the supply of procurement funds is directly affected, which also leads to the occurrence of the IOU phenomenon. Therefore, to solve the IOU problem once and for all, all circles must make a concerted effort, assume responsibility themselves, raise sufficient procurement funds through different channels, and conscientiously manage to prevent loss.

**Let us join efforts to do a good job in the supply of procurement funds for farm and sideline products.**

Judging from the experience of some localities in managing procurement funds for farm and sideline products and utilizing them in a flexible manner, which was reported in JINRONG SHIBAO, and judging from our practice of work, it is totally possible to successfully supply procurement funds for farm and sideline products. This is possible as long as the government pays attention to this work, and all departments cooperate closely and make a concerted effort to manage the funds and utilize them in a flexible manner. To be specific:

1. The prerequisite for doing a good job in supplying procurement funds is that government organs at all levels must pay attention to the procurement of farm and sideline products. The experiences of Chongqing, Chengdu, Sichuan, Heilongjiang, Zunyi, Guangyuan, and Henan, which were reported in JINRONG SHIBAO, show that the supply of procurement funds is better in areas where the local government pays attention to this issue.
2. The conscientious exercising of special management of procurement funds for farm and sideline products is an important guarantee for doing a good job in supplying and managing procurement funds for farm and sideline products. Of course, concrete measures are needed to enforce the special management. For instance, Heilongjiang Province adopts the contract system for grain procurement funds. Responsibilities are assigned to each and every level, using the method of "military order." Fairly good results have been achieved. To do a really good job in the special management, all localities should do more creative work.

3. Banks should regulate funds in a flexible manner to speed up capital turnover and increase the efficient use of procurement funds. China has a vast territory and natural conditions differ between north and south and east and west, which forms regional and seasonal differences in the use of procurement funds, time differences in the procurement of different varieties, and differences in the periods in which different specialized banks use the funds. These differences have created conditions for banks to utilize the credit lever and regulate funds flexibly.

4. Continuing with reform and gradually smoothing out the relations among the production, supply, marketing, and other related systems of farm and sideline products is the fundamental way to solve problems with procurement funds of farm and sideline products. Looking at the problem from a deeper economic level, problems with procurement funds and IOU's for farm and sideline products occur in the process of changing from an old to a new system. They are unavoidable in the course of exploring how to combine the planned and the commodity economies. In recent years, along with deepening reform and developing the commodity economy, banks have assumed increasing responsibility of locating funds for the procurement of farm and sideline products. Yet banks are intermediary organs of credit. Their capital use should rise in value, which contradicts the fact that bank funds are used to support large inventories and policy-related deficits in the current procurement of farm and sideline products. As a result, various contradictions between the supply of and demand for procurement funds ensued. These contradictions can be resolved once and for all only by deepening reform, really straightening out the production, supply, and marketing systems for farm and sideline products, combining the planned economy and market regulation in a better way, and effectively using the role of financial levers. However we cannot wait for the systems to be straightened out and then procure farm and sideline products, so we should continue to explore and sum up experiences in this regard and continue to accomplish something while the reform is being deepened. Chongqing City's method of using a "negotiable instrument," published in JIN-RONG SHIBAO, is a very good attempt. At present, as long as we pay attention to exercising the function of financial levers and adopt some good methods to supplement the inadequacies of our systems, it is not impossible for us to alleviate the contradiction in procurement funds and smoothly fulfill the state-assigned task of procuring farm and sideline products.

**Liu Zhongyi on Agricultural Exchanges With Taiwan**  
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[Article by P'u Li-yeh (5455 4539 2814): "Prospects Vast for Agricultural Exchanges on Both Sides of the Strait"—Interview With Liu Zhongyi, Minister of Agriculture]

[Text] Thanks to strong impetus from the Chinese Communist's peaceful unification policy and the joint efforts of compatriots on both sides of the Taiwan Strait in recent years, agricultural exchanges between both sides of the strait, like exchanges in other areas, have developed from scratch, and have gone from being secret to being open to become a big thing in exchanges between both sides of the strait. When agreeing to be interviewed by this publication's correspondent, Minister of Agriculture Liu Zhongyi said the following: "Prospects for agricultural exchanges and cooperation on both sides of the strait are extremely vast."

**Exchanges at Many Levels Have Begun, Some Proceeding From Casual Contacts To Cooperation on Projects**

After the more than 30 year rift between both sides of the strait ended, bilateral indirect trade in agricultural production began to develop. In talking about agricultural exchanges, Minister Liu Zhongyi said that agricultural exchanges between the mainland and Taiwan hold more advantage than other industries. First of all ranking officials on both sides of the strait pay close attention to and support the exchange. On the mainland, the government constantly emphasizes that agriculture is the foundation of the national economy. It hopes to rally all energies to emphasize and develop agriculture, including the assimilation of advanced techniques and capital from compatriots in Taiwan. In Taiwan, some persons such as Li Teng-hui and Mr. Chiang Yen-shih [5592 1750 1102] have a background in agriculture and devote a lot of attention to developing agriculture. Some high level people are extremely supportive of cooperation in agriculture and the fishing industry between both sides of the strait. Second, some people in agricultural departments and involved in agronomy on both sides of the straits used to be schoolmates or colleagues. They are fairly well acquainted with each other, which helps promote cooperation.

Liu Zhongyi said that agricultural exchanges between the two sides of the strait are conducted via many channels and at many levels. In some cases, Taiwan compatriots returning to their hometowns to visit relatives bring funds and skills with them to develop mainland agriculture and the fishing industry. In some cases, academic groups make exchanges or hold discussions among themselves, and some schools and scientific research units link hands in cooperation on topics. Investment in the mainland by Taiwan compatriots for the purpose of building factories has gradually increased since 1983, a substantial portion of the money going to the raising of aquatic products such as shrimp, eels, and abalone. Anywhere from several hundred thousand dollars to a million dollars has been invested this way. For example, a certain Mr. Hsu [6079] from Taiwan built a Taiwan-financed enterprise in Longhai County, Fujian Province in August 1987—the Longhai County Fuhai Aquatic Products Corporation, which uses advanced technology. Returns are extremely impressive. The first batch of eels exported to Japan totaled over five tons.

The trend is toward high level development in Taiwan compatriot's visits to the mainland to explore the development of agriculture. In recent years, the Taiwan Vegetable Oil Refining Industry Trade Association, the Taiwan Agricultural Pesticide Business Association, the Taipei Municipal Livestock Feed Business Trade Association, the Taiwan Farm Machinery Association, and the Taipei Animal Medicines Business Association, as well as large business enterprises in Taiwan such as the T'ung-i Group and the Wei-ch'uan Group, have come to the mainland on inspections and to conduct agricultural exchanges. The Chinese Agricultural Exchange Association on the mainland warmly welcomed them.

While Taiwan compatriots bring funds and skills to the mainland to develop agricultural cooperation, academic exchanges on agriculture between both sides of the strait are also extremely lively. Liu Zhongyi told of a November 1988 meeting of experts and scholars in Hong Kong that parties concerned in the Chinese Agricultural Association organized for talks with compatriots from Taiwan in which all parties gave briefings on their own agricultural development. During May 1990, the Chinese Agricultural Exchange Association and Taiwan academicians explored together in Nanjing problems in spreading agricultural techniques. In early May 1991, academicians from both sides of the strait also convened a seedling industry seminar. The Chinese Agricultural Exchange Association also plans another discussion with Taiwan agronomists of problems in improving southern crops.

#### **Agriculture on One Side of the Strait Can Help Agriculture on the Other; Cooperative Exchanges Benefit Both Parties**

The gradual warming of contacts on agricultural matters between both sides of the strait has a rationale all its own. Liu Zhongyi said: "On the one hand, the mainland has adopted a series of policies to support and encourage this kind of cooperation. At the same time, since agriculture on one side of the strait can help agriculture on the other, both parties benefit from cooperative exchanges, and everyone is very interested in cooperation."

The mutually beneficial nature of agriculture on both sides of the strait shows up specifically in the following several regards:

First of all, the mainland is a vast area containing abundant resources. By comparison, Taiwan is small and resources are scant. The mainland has richly varied kinds of terrain as well as a multiplicity of climatic conditions, which lend richness and diversity to agricultural production. The flocking to the mainland in recent years of Taiwan compatriots troubled by the shortage of resources in Taiwan to discuss cooperation in the aquatic products breeding and fishing industries provides excellent testimony to this.

Second, Taiwan is currently facing hardships in the form of a shortage of labor in agriculture, rising wages, and a

decline in competitiveness of agricultural products, while in the nearby mainland, labor costs are lower than in Taiwan. Since mainland rural reform, the spread and application of agricultural science and technology has moved along very rapidly, and the labor productivity rate has risen. This has freed large numbers of surplus laborers and the time of large numbers of surplus laborers. Rarely can other places offer such an advantage. In Taiwan today, quite a few seed companies have had to turn to Southeast Asia for seed production because of the price of labor on the island. Actually, labor costs in these places are also far higher than on the mainland. If Taiwan compatriots are able to come to the mainland to cooperate with us, that will be very convenient and beneficial for them. Not only is the labor supply plentiful on the mainland, but soil and climatic conditions are also suitable.

Third, each side of the strait shows different strengths in agricultural technology. Opportunities for borrowing and exchanging skills with each other are very numerous. Some Taiwan agriculturists who came to the mainland on an inspection tour felt that the mainland had a wealth of agricultural scientists and technicians, and that its scientific research facilities, techniques, and results were also very good. In certain fields, such as the raising of shrimp, eels, abalone, and live fish food or bait, and in the processing of agricultural products and maintaining freshness, Taiwan is outstanding. Along the mainland coast, where beaches are extremely plentiful, Taiwan's aquatic products raising techniques can be developed for use. Recently, Taiwan suggested the introduction of potatoes and buckwheat, a project on which the mainland can provide help. Such cooperation and mutual assistance benefits the development of agriculture on both sides of the strait.

Fourth, although foreign exchange earning agriculture has developed on the mainland, the mainland entered international markets fairly late. It lacks experience and its international marketing channels are not broad enough. Meanwhile, Taiwan's agricultural products entered international markets earlier, and Taiwan accumulated experience in the development of foreign exchange earning agriculture. In this regard, Taiwan can use its foreign trade relations and links to conduct an agricultural products export trade in cooperation with the mainland. If both sides cooperate sincerely, Chinese agricultural products can have a substantial percentage of world trade in agricultural products.

Liu Zhongyi said that for the past several year's Taiwan's agriculture has been shrinking, one of the reasons being the increasingly fierce world competition in the agricultural products trade. The United States has dumped large quantities of agricultural products in Taiwan. Another reason is that Taiwan lacks both agricultural and labor resources. What Taiwan lacks, the mainland has in abundance. If Taiwan and the mainland work together, that will help Taiwan's agriculture get out of its difficulties extremely fast.

Liu Zhongyi emphasized that our reasons for wanting to develop cooperative exchanges between both sides of the strait are not what some people in Taiwan claim they are, namely a mainland quest for Taiwanese capital and technology, using the Taiwanese to develop mainland agriculture. It must be said that in recent years when some Taiwan compatriots have brought back funds for the development of agriculture, this has helped a single township or village, but it has been just a drop in the bucket as far as development of agriculture all over the mainland. We advocate exchanges out of compatriotic feeling. Our goal is to increase friendship, to use the strengths of one to remedy the weaknesses of the other, mutual benefit and mutual interest, and joint development.

#### No Putting Up Artificial Barriers Awaiting the Advent of Direct Bilateral Exchanges and Cooperation

Liu Zhongyi said that agricultural cooperation and exchanges are of mutual benefit, and are consistent with the interests and desires of the people on both sides of the Taiwan Strait. However, the Taiwan authorities lump this issue together with other issues, putting up all kinds of barriers. This is extremely unwise and detrimental to both parties without providing any benefit.

He went on to say that following the 1988 Hong Kong meeting with Taiwan agronomists that the Chinese Agricultural Exchange Association arranged, both parties expressed hope for a further strengthening of cooperation. Afterward in several academic activities, everyone gained a further understanding and began serious discussion of several cooperation projects. In 1990, both parties drew up the first batch of eight cooperative projects, including development of Hainan Island's sugarcane, paddy rice and fishing industry resources, and of asparagus and aquatic products in Dongshan County, Fujian Province. During 1990, parties concerned from Taiwan visited Hainan and Fujian provinces to conduct feasibility studies, which further strengthened confidence in cooperation. Both sides preliminarily agreed that this project was to be carried out during 1991. Not long ago, however, reportedly the Taiwan authorities announced a temporary halt in cooperative agricultural projects between both sides of the strait.

Why did this activity founder? According to a Taiwan explanation, the halt to these projects was related to the problems that have occurred in the Taiwan Strait during 1991, including fishermen poaching and smuggling.

Liu Zhongyi's view of this is just what does the problem of poaching and smuggling that the Taiwan authorities talk about have to do with agricultural exchanges? These problems can be completely solved step-by-step by improving contacts through channels concerned. They just should not become a reason for damaging agricultural exchanges between both sides of the strait. Actually, this is simply a pretext on the part of the Taiwan authorities, which has as its goal nothing more than haggling. They hardly realize that such methods will not

work, and will hurt the interests of agronomists and the public on both sides of the strait, and the ones to be hurt most will be the people of Taiwan.

Liu Zhongyi said that quite a few problems had also been encountered in previous exchanges and cooperations, and these problems could not be solved because both parties could not talk with each other directly. This hurt normal exchanges and cooperation between both sides of the strait. For example, some Taiwan compatriots said they hoped to cooperate in fishing with mainland fishermen, but how to cooperate was a matter requiring discussion and an agreement by parties concerned on both sides. As another example, in recent years, quite a few Taiwan agricultural experts and scholars have visited, made surveys, and invested in the mainland, and there have also been quite a few academic exchanges. Everyone has been very happy with the cooperation. Regrettably, however, because of the various restrictions that Taiwan imposes, not a single mainland agronomist or scholar has been invited to go to Taiwan to take part in conferences, to visit, or to conduct surveys. This is unfair. Numerous people in the same occupation in Taiwan also feel indignant about such a lack of reciprocity. To help normal exchanges between both sides of the straits, we hope that the Taiwan authorities will adopt wise policies to put an early end to this unreasonable state of affairs and make a joint contribution to the prosperity of China's agriculture and the development of agricultural science and technology.

#### Hunan Grain, Rapeseed Output

91P30162K *Changsha HUNAN RIBAO* in Chinese  
14 Jul 91 p 1

[Summary] The Hunan spring grain area exceeded 6 million mu, and gross output was 613,100 tons, an 18.3 percent increase over 1990. The spring rape area exceeded 11 million mu, and rapeseed output was 740,400 tons, a 19.1 percent increase.

#### Shanxi Invests Heavily in Granary Construction

OW1008124091 *Beijing XINHUA* in English  
0826 GMT 10 Aug 91

[Text] Beijing, August 10 (XINHUA)—North China's Shanxi Province has invested over 63 million yuan this year to construct permanent and temporary grain depots, according to today's ECONOMIC INFORMATION.

The new granaries can store over 350 million kilograms of grain, according to the paper.

While the province has reaped bumper harvests for several years running, grain departments were faced with a severe shortage of storage facilities.

In order to solve this problem, provincial authorities overcame difficulties such as funds shortages and constructed and refurbished numerous grain depots and stations throughout the province.

**Characteristics, Causes of Robbery**

91CM0448A *Shanghai MINZHU YU FAZHI /DEMOCRACY AND THE LEGAL SYSTEM*  
in Chinese No 4, 12 Apr 91 p 48

[Article by Wang Zuojin and Wei Fawenn: "Characteristics, Reasons and Prevention of Crimes of Robbery—as seen from investigation of 251 criminals"]

[Excerpt] In recent years, robbery has become an increasing social problem, and has aroused widespread concern. Thus, an analysis of the characteristics and causes of this crime and a study of measures to prevent it are of great significance in finding out its pattern and insuring social stability. According to an investigation of 251 offenders in the No. 3 prison, and in the Yuxiang and Dongcun state farms in Shanxi Province, the writers of this article wish to express some premature views on the issue of robbery.

**I. Principal Characteristics of Robbery**

A. More robbers gang up to commit crimes. Among the 251 robbers under investigation, 183 or 72.9 percent of them had ganged up to commit crimes. Ninety-two or half of them were members of gangs who later formed groups to commit robbery. According to confessions made by the offenders, they were three or five at first, playing pranks and stirring up trouble. Later they started to steal and stir up fights. They became fairly organized groups. Once someone suggested robbery, others immediately followed.

B. The number of peasants who commit crimes increases each passing day; 156 or about 60 percent of the offenders were peasants. The main reason is that since implementation of the household contract responsibility system, productivity increased and there was excess labor. In addition, the functions of various village-level party, government, youth and women organizations have been inappropriate, and there are fewer collective activities. As a result, some peasants, particularly rural young people, are spiritually barren due to lack of education and organizational restraints. Especially under the influence of the current general mood of society, their selfish desire has become stronger than ever, and they have eventually taken the path of committing robbery.

C. There were more cases involving premeditated robbery. Such cases accounted for 62 percent of the total cases investigated. Criminals had made fairly careful planning beforehand, and they had a fairly good knowledge about the victims' properties and environment. They often selected the best opportunity to ensure their success. Their main targets were first, trucks; second, self-employed businessmen, and specialized households; third, various stores, banking facilities and warehouses.

D. They used ruthless methods to commit crimes. Among the 251 offenders, 46 of them had injured, four of them killed and 18 of them raped their victims in the

course of committing their offense. They resorted to violence even when the victims put up no resistance and when the victims were unaware of what was happening, and killed their victims to keep their mouths shut. These offenders had made preparations to do so when they first planned the theft. Once they failed to accomplish theft, they resorted to robbery and violence against the victim, which led to killing people for their money.

E. Offenders committed more than one crime. One hundred twelve, or 45 percent of the 251 robbers also engaged in theft. Sixty-five, or 29 percent of them committed rape. Many cases of robbery involved other types of offense, and such cases were quite complicated. Some offenders had been jailed several times, but they refused to mend their ways despite repeated admonition.

**II. Causes of Robbery**

A. Blunted sense of the legal system. Laws have been enacted one after another since the beginning of the 80's. However, because of insufficient publicity, many people have weak legal concepts, ignore the laws and have little sense of the legal system.

B. Bad habit of loving ease and hating work. These robbers shared a common psychological pursuit—a strong desire for material gains, but are unwilling to work hard for money. Thus, they do not hesitate to make reckless moves when they fail to use their own economic means to satisfy their desire for a life of pleasure. As seen from the financial situation of 251 offenders, the majority of them are not too bad. They have gone down the evil road of robbery further and further simply because they are avaricious.

C. Unhealthy family environment. During the investigation, we came to realize that hard luck or improper educational methods have prevented some young people from feeling the warmth of a family, and deprived them of a decent upbringing. Some have led a vagrant or semi-vagrant life for a long time. Living in solitude, these people are eccentric. Detesting the world and its ways and lacking assurance for a decent living, they easily fall prey to the unhealthy environment and evildoers. As many as 134 of the 251 offenders had fallen into the abyss of committing crimes in such a way.

D. Biased educational goals in school. Schools over-emphasize intellectual development, while neglecting moral education and the need for all-round development. They place undue emphasis on obtaining higher levels. Unable to extricate themselves from their predicament, some students develop the idea of writing themselves off as hopeless, and act recklessly when they find themselves lagging behind in study. Seventeen of the criminals under investigation, had gradually gone astray due to poor study and lack of confidence.

E. Pollution of decadent cultural life. Pornographic books and audio and video tapes have been rampant in recent years, and various types of ugly crimes prevail. Imperceptibly influenced by what they see and hear,

some people, especially young ones, have unconsciously generated the desire of doing evil and even commit crimes. [passage omitted]

### Negative Correlation Between Income, Education

91CM0464A Beijing RENKOU YU JINGJI  
[POPULATION AND ECONOMICS] in Chinese No 65,  
25 Apr 91 pp 36-39

[Article by Wang Xianyi of the Population Institute of Zhejiang Medical University: "Tentative Discussion of the Impact of Income Gaps on Family Intellectual Investment"]

[Excerpts] [passage omitted] In China, the correlation between income levels and education levels are very obscure, and there is even a tendency toward negative correlations. In 1988, in thirteen of the biggest sectors, average wages for the educational and culture-and-art institutions' employees, who had higher education levels, were 1,447 yuan, corresponding exactly to the average wage for employees of all sectors. The average wage for the transport, and postal and telecommunications sectors' employees, who had lower education levels, was 2,008 yuan, the second highest among the thirteen biggest sectors.<sup>1</sup> According to 1982 census data, in the five sectors which had higher average employee wages than the educational and culture-and-art institutions, around 90 percent of the employees had secondary or primary school level education. On the other hand, in China there are no great gaps between the average employee wages in different sectors; in 1988, except for the agriculture, forestry, animal husbandry, fishery, and water conservancy sectors as well as commerce and service industry, average employee wages in other sectors were the same.

Table 1. Comparison of Real Income Levels for Intellectuals and Manual Workers in China (1981) (unit: yuan)

Age	Intellectuals (College Level Education)	Manual Workers (Secondary- or Primary-School Level Education)	Income Gaps Between Former and Latter
25	59.80	67.18	-7.38
26-28	63.40	71.55	-8.15
29-31	63.40	77.63	-14.23
32-34	65.90	76.22	-10.32
35-37	68.50	83.32	-14.82
38-40	73.40	88.32	-14.92
41-43	77.50	87.60	-10.10
44-46	78.30	97.10	-18.10
47-49	87.10	99.72	-12.62
50-52	103.60	102.83	0.77
53-55	124.20	107.10	17.10

Source: JINGJI YANJIU [ECONOMIC RESEARCH] No. 8, 1982 p.38.

The above is the situation of sectoral income gaps. Let us look further at the income gaps for workers of different

occupations. Table 1 clearly shows the negative correlation between education levels and income levels. In the table, the data indicate: intellectuals with college-level education have real incomes higher than manual workers with secondary- or primary-school level education only after they reached the age of 50; before age 50, intellectual investment produces negative returns. This was the situation in 1981, and is the situation now. Between 1980 and 1988, total wages increased by 154.3 billion yuan, of which 50.2 percent was due to the increase of standard wages, with 50 percent due to increase of extra-standard-wage incomes (including bonus and allowance);<sup>2</sup> the latter was distributed on an average basis, while the former covered the standard wages of different levels for new as well as old employees. It can be seen that the implementation of the structural wage system led to the increasing equalization of incomes for employees, with little change regarding the income gaps existing in 1981.

Some people have made estimates on the lifetime wage-income levels for people with different levels of education; the results are: 6,063.3 yuan for master-degree holders; 5,595.4 yuan for college graduates; 6,038.8 yuan for high-school graduates; and 6,010.5 yuan for middle-school graduates,<sup>3</sup> demonstrating little difference in incomes for employees of four different levels of education which entail obvious differences in terms of intellectual investment. One of the reasons for such phenomenon has been the equalization in wage-income distribution, and a second has been that income levels are affected more by seniority than by education levels. Furthermore, not only monetary wage levels are greatly affected by seniority, but nonmonetary income such as housing distribution and rank determination for employees have also been to a great extent affected by seniority.

It can be seen from the above analysis that in China there now exist irrational income gaps, and that there exists weak or negative correlation between intellectual investment brought about by educational and income levels.

### III.

Although education levels have weak impact on income levels, such irrational income gaps have in turn exerted a huge impact on intellectual investment. As Table 2 clearly shows, in recent years the amount of urban families' intellectual investment did not increase in relation to the increase in living expenses, but decreased. In 1985-1988, living expenses had a real increase of 16.72 percent (calculated at the 1985 constant price; similarly hereafter), but the amount for intellectual investment had a real increase of only 1.40 percent. In 1987 there was even negative growth. The share of the amount for intellectual investment in total living expenses reflects the inclination for intellectual investment. The decreasing trend in the value of this indicator demonstrates the declining emphasis on intellectual investment. This is the urban situation, and the rural situation is more so. Results of a survey conducted by the Population Institute of Fudan University in rural areas of

three provinces and municipalities in December 1987, show that for six investment items the majority gave first priority to housing, the second was improved living standards, and

last was education for adults and children.<sup>4</sup> [passage omitted]

**Table 2. Per Capita Annual Living Expenses and Intellectual Investment of Urban Families (unit: yuan)**

Year	Per Capita Annual Living Expenses at Current Price	Per Capita Annual Living Expenses at 1985 Price	Per Capita Amount for Intellectual Investment at Current Price	Per Capita Amount for Intellectual Investment at 1985 Price	Share of Amount for Intellectual Investment in Amount for Living Expenses at Current Price
1985	673.20	673.20	68.04	68.04	10.11
1986	798.96	746.69	72.91	68.14	9.13
1987	884.40	759.79	71.35	61.30	8.06
1988	1,103.96	785.75	96.93	68.99	8.78

Note: In this table, the amount for intellectual investment is the sum total of expenses on stationary, publications, school fees, and entertainment, thus referring to intellectual investment in a broad sense. Source: calculated on the basis of *Zhongguo Tongji Nianjian* [Statistical Yearbook of China].

This is only the direct manifestation of the impact of irrational income gaps on intellectual investment, and its indirect manifestation is even more disturbing.

According to a sample survey conducted in nine provinces and municipalities in July 1987, on the situation of children, the school-attendance rate for school-age children was 76.7 percent; the urban rate for children's school attendance was 84.9 percent and the rural rate was 74.6 percent, that is, one-fourth of rural children were not attending school.<sup>5</sup> Backward technologies for agricultural production do not require a labor force with a high level of education; the peasants, with limited income levels, are not willing to make additional intellectual investment which produces little or even negative returns. In cities, as employment requires a certain level of education, the urban investment in secondary- and primary-school education is higher than the rural one. However, because of the impact of irrational income gaps, the investment in higher education is on the low side, as manifested by the lack of improvement in the situation of low-level intellectual structure of employees. For example, in Shanghai which has rather high educational levels, the average grade of skilled workers before 1966 was between 4 and 4.5, skilled workers with high school education accounted for 10 percent of all employees. In 1987 the average grade was only around 3.5, skilled workers with high school education accounted for less than 5 percent. Of employees engaged in mental labor, those with college-level education only constituted 20.96 percent; and as many as four-fifths were without college-level degrees, while 41.49 percent of these had primary- or middle-school diplomas. Of the employees engaged in manual labor, only 0.39 percent had received higher education, while three-fourths had received only middle- or primary-school education or were illiterate or semi-illiterate.<sup>6</sup>

Income gaps not only affect parents' inclination to invest in children's intellectual development, but also affect the desire for schooling on the part of the students themselves. According to a survey of 872 graduates in Nanjing's eight institutions of higher learning, 75 people, accounting for 8.6 percent of those surveyed, regarded attending college as their "greatest regret."<sup>7</sup> Such disliking of education does not have significant impact on the students' future economic incomes, but directly affects the returns on intellectual investment, preventing limited intellectual investment from producing due returns.

Decreased intellectual investment is also manifested in the increase in the rate of labor participation, making it difficult to change the situation of the low-level education structure of employees. Its impact on the development of the national economy is self-evident. In 1982, the labor participation rate for the population group of ages of 15-18 was 0.74 in China, 0.45 for the United States, 0.18 for France in 1983, and 0.19 for Japan.<sup>8</sup> The higher the value of this indicator, the lower the indicated education levels of the employees of the age group. As Table 3 indicates, in 1980-1988, the share of those with technical-school or higher levels of education in the body of new employees did not show an increase; there was even some decrease in 1984 and in 1985, with a weak upturn in 1986-1988; but the 1982 level had still not been reached. The share of those with secondary- or primary-school level education and the others (including those illiterate and semi-illiterate) remained large, with an average value of 86.88 percent for the nine years. As can be seen, the situation of low educational levels for the urban employees remained unimproved after the eight years.

**Table 3. Sources and Education Structure of New Urban Employees (unit: 10,000 persons)**

	1980	1981	1982	1983	1984	1985	1986	1987	1988
Total	900.0	820.0	665.0	628.3	721.5	813.6	793.1	799.1	844.3
College, Technical-School, Vocational-School Graduates	80	107.9	117.4	93.4	81.7	88.5	99.3	117.1	130.8
Share (percent)	8.89	13.16	17.65	14.87	11.32	10.88	12.52	14.65	15.49
Secondary- and Primary-School Graduates, Other	820	712.1	547.6	534.9	639.8	725.1	693.8	682	713.5
Share (percent)	91.11	86.84	82.35	85.13	88.68	89.12	87.48	86.35	84.51

Source: *Zhongguo Tongji Nianjian* [Statistical Yearbook of China]

**Footnotes**

1. *Zhongguo Tongji Nianjian* [Statistical Yearbook of China 1989], China Statistical Press.
2. *Zhongguo Tongji Nianjian 1989* [Statistical Yearbook of China 1989], China Statistical Press.
3. GUANLI SHIJIE [THE WORLD OF MANAGEMENT] No. 3 (1988).
4. RENKOU XUEKAN [JOURNAL OF POPULATION] No. 1 (1989), p.35.
5. RENMIN RIBAO 25 Oct 1987.
6. RENKOU XUEKAN [JOURNAL OF POPULATION] No. 5 (1989), p.24.
7. SHEHUIXUE TANSUO [SOCIOLOGICAL EXPLO-  
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8. "Special Issue on Economics and Management Science" in NANJING DAXUE XUEBAO [JOURNAL OF NANJING UNIVERSITY] (1987).

**QIUSHI on Defense Science, Technology**

HK0860900 Beijing *QIUSHI* in Chinese No 9,  
1 May 91 pp 25-30

[Article by Zhao Bigao (6392 1801 7559) and Kong Li (1313 0448) from the National Defense Science, Technology, and Industry Commission's Political and Propaganda Departments: "Revelations From Brilliant Successes—Reviewing the Establishment and Development of Science and Technology for National Defense"]

[Text] In 1945, when the first atomic bomb exploded over the Alamogordo Desert in the western part of the United States, the Chinese people were waging an arduous struggle against the Japanese aggressors with their indigenous guns and land mines. In 1949, when the Soviet Union exploded its first atomic bomb, New China was still in its infancy, with full-scale construction under way. Within the few short decades since its founding, New China has amazed the world with its immense achievements in scientific and technological undertakings, which it started from scratch and quickly developed from small to large. Today, China has joined the front ranks of the world in terms of scientific and technological standards. It has been only 30 years since China's first short-range missile was developed in 1961. The successful launching of "two integrated missiles" and of "three satellites on a single space launch vehicle (SLV)," the underwater launching of submarine launched ballistic missiles (SLBM's), and the launching of communications satellites, solar synchronous orbit satellites, the "Asia 1" satellite, and the Long March II rocket with strap-on boosters, and so on, mean that China has become one of the five countries in the world to have mastered nuclear and space technology on its own.

Take space technology for instance. We have joined the front ranks of the world in a number of important areas. Where satellite recovery is concerned, the United States, the Soviet Union, and China are the only three countries in the world to have mastered this technology and China has set a record of complete success in recovery. After the Soviet Union, the United States, and France, China is the fourth country to have launched a number of satellites using a single SLV. In satellite surveying and controlling technology, China has established a tracking, telemetry, and command network comprising more than 10 ground observatories with surveying, controlling, and communications centers and telemetry control vessels. Surveying accuracy is up to advanced world standards. After the United States and France, China is the third country to have mastered high-energy cryogenic rocket fuel technology. In geostationary orbit satellite launching technology, China is one of five countries in the world capable of launching satellites with such technology.

Relevant statistics show that, to this date, China has successfully conducted flight tests on a variety of strategic missile models in addition to dozens of nuclear tests of different types and forms. It has also successfully launched 30 man-made satellites of various types and

has accurately recovered 12 satellites with a 100 percent recovery rate. Meanwhile, several thousand tests have been conducted on conventional weapons. Great successes have also been achieved in the research and development of new weapons and equipment. During the Seventh Five-Year Plan alone, the vast numbers of scientific and technological personnel working on the science and technology for national defense front have completed over 2,000 projects in the fields of aeronautics, astronautics, electronics, nuclear, ordnance, and shipbuilding industries, and have won more than 300 national invention awards and more than 400 national scientific and technological advancement awards. In addition, we have also established basically complete systems for science and technology for national defense and for production. We have fostered and trained a contingent of research and production personnel who are ideologically sound and technically proficient and who have a fine work style and abundant strength. This has helped lay an important material and technical foundation for the development of scientific and technological undertakings for national defense.

Meanwhile, taking advantage of the superiority of the socialist system, we have fully brought into play the guiding and permeating role of science and technology for national defense to promote the development of civilian technology and opened the path of joint military-civilian production with Chinese characteristics. Since the Third Plenary Session of the 11th CPC Central Committee in particular, the defense science and technology front has achieved remarkable successes and made new strides forward by adhering to the policy of "combining military with civilian needs and peacetime with wartime needs, giving priority to the development of military supplies, and using the military industries to sustain civilian industries" formulated by the Central Committee and the Central Military Commission. In recent years, the production of civilian goods has accounted for over 60 percent of the total output value of the defense industry. Profits and taxes handed over have averaged more than 1 billion yuan a year. Scores of tens of thousands of military technologies have been transferred to civilian applications. Boosted by science and technology for national defense, China has quickly established and developed its computer technology, micro-electronic technology, photoelectric technology, systems engineering, information technology, composite materials technology, telemetry, remote control and remote sensing technology, simulation technology, space technology, space medicine, and other technologies. In this way, science and technology for national defense has quickly been converted into actual productive forces, which has in turn promoted the rapid development of the national economy.

What revelations have we gained from our review of the great successes made in science and technology for national defense over the past 40 years? Why is it that a developing country like ours can make such miraculous achievements within a relatively short period of time? What do these miracles tell us?

**1. The establishment of the socialist system and the party's leadership are the fundamental guarantees for the success of science and technology for national defense.**

China is the native land of rockets. Several thousand years ago [as published], China invented and manufactured the world's first "rocket." However, when the developed countries were beginning to develop modern rocket technology in the 1920's, China was still under the oppression of imperialism, feudalism, and bureaucratic-capitalism. On the eve of liberation, China's science and technology for national defense was still exceedingly backward, almost like a blank page. At that time, we could hardly develop and produce simple and crude weapons and equipment, to say nothing about developing sophisticated science and technology for national defense. If the establishment of the "Imperial Armory" at Anqing by the Qing Court in 1861 is taken as the beginning of China's defense industry, we must admit that development had been sluggish in the 90 years prior to national liberation in 1949. Sources indicate that the few military factories under the rule of the northern warlords and the Kuomintang could only produce light weapons of backward quality due to corruption on the part of the government as well as backward science and technology. The military relied mainly on imports for its weapons and equipment. In those days, China was poor and backward. For a long time, it remained vulnerable to attack because its frontiers were not properly defended.

The establishment of the socialist system and the party's leadership have created excellent conditions and opened broad vistas for the development of science and technology for national defense and for the enhancement of military strength. Shortly after the founding of New China, when we were still very weak in terms of economic strength, science and technology, and industrial foundation, our party and state were confronted with the formidable task of economic construction. At that time, the major countries had already entered the so-called "atomic age" and "space age" but China was still under the encirclement and threat of imperialism. Under the circumstances, in order to defend and consolidate the newborn red political power and break the blockade of imperialism, major efforts had to be made to strengthen defense construction and produce modernized weapons and equipment as quickly as possible while developing the national economy. With great foresight, the party Central Committee proceeded from the need to build a powerful and strong socialist New China and resolutely made the strategic decision to develop our own scientific and technological undertakings for national defense. In January 1955, Comrade Mao Zedong personally presided over the enlarged meeting of the secretariat under the Central Committee. This meeting, which studied and discussed the development of a nuclear industry in China, marked the beginning of China's nuclear industry. Not long after, the Committee for Scientific Planning was established under the leadership of Premier Zhou Enlai and Vice Premiers Chen Yi, Li Fuchun, and Nie Rongzhen. The committee formulated the

"Long-Term Program for the Development of Science and Technology, 1956-1967," and took the development of an atomic bomb, rockets, and jet technologies as its key tasks. To ensure implementation of the programs for the development of rocket and jet technologies on an organizational level, the Commission for Aviation Industry was established with Marshal Nie Rongzhen at the helm. In October 1956, China's first missile research body—the Fifth Institute under the Ministry of National Defense, was established. Comrade Qian Xuesen was appointed president of the Institute. In May 1958, Chairman Mao Zedong made the announcement that "we, too, must produce man-made satellites" at the Second Plenary Session of the Eighth National Party Congress. Thus began China's space program. In order to strengthen its centralized and unified leadership over science and technology for national defense, the Central Committee decided in October 1958 to set up the People's Liberation Army [PLA] National Defense Science and Technology Commission, with Comrade Nie Rongzhen as chairman.

After making these major decisions on the development of science and technology for national defense, the party Central Committee fully utilized the superiority of the socialist system to pool manpower, material, and financial resources. Thanks to these decisions, China saw a rapid development of its scientific and technological undertakings for national defense within a fairly short time. Miracles occurred in turn: In 1961, we developed China's first short-range missile after only three years of research. In 1964, the first Chinese-made atomic bomb was successfully tested. We also successfully conducted tests on missile and nuclear weapons in 1966 and detonated China's first hydrogen bomb a year later. China launched its first man-made satellite in 1970 and launched a recoverable satellite in 1975. After the Third Plenary of the 11th CPC Central Committee, China entered a new historical period in the development of its scientific and technological undertakings for national defense. The year 1980 saw the successful launching of a missile to a designated location in the Pacific. Three satellites were successfully launched on a single SLV in 1981 and the underwater launch of a missile from a submarine was successfully carried out in 1982. In the following year, the "Galaxy" 100 million instructions per second (MIPS) electronic computer passed state appraisal. Since 1984, experimental communications satellites, practical telecommunications satellites, and solar synchronous orbit satellites have been launched in turn. In 1990, the "Asia 1" satellite and the Long March II rocket with strap-on boosters were successfully launched. In 1987, China formally announced the entry of its rocket technology into the international market and began accepting overseas orders for satellite launches. Such a swift pace of development in science and technology for national defense is not only without parallel in Old China, but has outstripped the developed capitalist countries in certain respects. Sources show that it took the United States seven years and four months to proceed from the first successful atomic bomb test to the

first successful hydrogen bomb test. The same process took Britain four years and seven months and France, eight years and six months; but it took China only two years and eight months. China developed its first nuclear warhead only two years after its first nuclear test, greatly exceeding other countries in terms of the pace of development.

China was able to achieve tremendous successes in its scientific and technological undertakings for national defense within a few decades because it had the party's leadership and the superior socialist system to fall back on. It was precisely because we had the party's leadership and the superior socialist system that we were able to muster the nation's outstanding scientific and technological personnel and concentrate large quantities of funds and equipment for the purpose, during the hard times shortly after the founding of the People's Republic. With these, we were able to withstand the encirclement and threat of imperialism and surmount the difficulties posed by the tearing up of contracts and the recall of experts by the Soviet Government in the 1950's and 1960's and overcome the interference of "over-anxiety for quick success," the "prevailing practice of abandoning projects halfway," and other erroneous trends of thought, thereby ensuring the smooth development of science and technology for national defense. Without the assurance of the party's leadership, the correct decisions on the part of the party Central Committee, and the superiority of the socialist system, such tremendous successes would have been unthinkable. Reviewing the cause of our development of science and technology for national defense, leading scientist Qian Xuesen said with deep understanding that, without the superiority of the socialist system and without the correct decisions on the part of the party Central Committee and Chairman Mao, we would not have any atomic bombs, hydrogen bombs, missiles, or man-made satellites today and the People's China would have no place in this world.

## 2. The practice of a planned economy is an important reason for the success of our science and technology for national defense.

Experience over the years tells us that the combination of a planned economy with market regulation is in conformity with the actual conditions of our country and the requirements of economic development. A planned economy and market regulation both have their own advantages and strong points. As pointed out by Comrade Li Peng in his "Report on the Outline of the 10-Year Program and of the Eighth Five-Year Plan for National Economic and Social Development," the advantages and strong points of a planned economy are as follows: Planning can help maintain proportionate development of the national economy with respect to the different sectors and ensure a rational allocation of resources, thereby avoiding anarchy. It also serves to mobilize and muster the financial and material resources necessary for the construction of important projects and prevent wasteful, duplicated construction of major projects. These advantages and strong points of a

planned economy have been most obvious in the establishment and development of our science and technology for national defense. Scientific and technological undertakings for national defense deal with a wide range of hi-tech disciplines and involve huge expenses in development and production. As complicated systems engineering projects they not only require planning, but call for the formulation of well-conceived plans. Careless planning will result in huge losses in terms of manpower, material, and financial resources, as well as in technical strength. The history of our development of science and technology for national defense shows that when programs and plans which suited the needs of the national economy were formulated in accordance with the requirements of socialist economic patterns, and when the means of production and labor power were allocated in a rational way, science and technology for national defense developed swiftly and achieved great successes without having to go through many twists and turns. However, when these programs and plans ran counter to socialist economic patterns and did not reflect the actual conditions of the nation and the military, the development of science and technology for national defense stalled and encountered numerous difficulties and setbacks.

In the 1950's and 1960's, we encountered a good deal of difficulties in our development of science and technology for national defense. Thanks to the correct decisions on the part of the party Central Committee, however, we formulated a Program for the Development of Science and Technology (that is, the 12-Year Program) which suited the needs of national economic development, and set the development objectives and priorities in accordance with our national and military conditions. In this way, a solid foundation was laid for the rapid development and subsequent takeoff of our science and technology for national defense. This also spurred on and pushed forward the development of the national economy as a whole and properly brought into play the precursor role of scientific and technological undertakings for national defense.

During the decade of turmoil, the work of formulating programs and plans for the development of science and technology for national defense was seriously divorced from reality due to the interference of "leftist" guiding ideologies and an over-anxiety for quick success. In terms of the development objectives for sophisticated defense technologies, the unrealistic slogan of "catching up in two years and surpassing in three years" was put forward. What this implied was that in a matter of four or five years, we must catch up with the advanced world standards in the first three years and surpass advanced world standards in the last two years. As a result, some hastily mounted projects and research programs had to be abandoned half way. This not only affected the development of our science and technology for national defense, but it also inflicted losses upon our economic construction.

After the smashing of the gang of four, particularly after the Third Plenary Session of the 11th CPC Central Committee, our party restored the ideological line of seeking truth from facts. When formulating programs and plans for the development of science and technology for national defense, the importance of proceeding from the strategic shift in defense construction and from our national conditions and capabilities was stressed. Scientific and technological undertakings for national defense not only must reflect the level and trend in the development of science and technology for national defense, but must also be in accord with national and military strategies. They must not only proceed from the needs of army building, but must fully take into account the effects of economic development, the scientific, technological, and industrial levels, as well as factors like testing means, human resources, and investment intensity. Because our programs and plans for the development of science and technology for national defense accorded with our national and military conditions and suited the needs of economic development, we have been able to correct the "leftist" mistakes of the past. The development of science and technology for national defense has thus entered a new period and has witnessed a new leap. At present, China is still in the primary stage of socialism. As a developing country, it has always been hard pressed for capital and funds for the development of scientific and technological undertakings for national defense. Under the circumstances, we must get more done with less money and strive to achieve optimum results with limited funds. This means that we must give full scope to the superiority of a planned economy, implement the guideline of the party Central Committee and the Central Military Commission on "reducing the scale of development and giving prominence to the key projects," and spend our limited funds where it really matters. Facts prove that when the relationship between needs and possibility, and between foundation-laying and development, was correctly handled in the formulation of plans, we were able to produce good economic results and blaze a trail for the development of science and technology for national defense with Chinese characteristics. In short, had we not practiced a socialist planned economy we would not have been able to achieve magnificent results with our limited funds. Even American scientists had to admit this fact. They said: "With the extraordinary strength mobilized by the state, many key problems can be readily resolved in China."

### 3. Large-scale socialist cooperation is an important condition for the success of science and technology for national defense.

Cooperation is the natural product of, and necessary condition for, the development of science and technology. Science and technology for national defense is a major branch of systems engineering. It is of utmost complexity, involving different spheres, disciplines, specialties, and technological processes of modern science and technology. As such, it requires careful organization, concerted action, unified command, and the coordination of various quarters. The establishment of the

socialist system has created the right kind of conditions for this kind of cooperation and ensured the realization of this cooperation on a more conscious basis. In an economically backward socialist country like ours, the development of science and technology for national defense is beset with difficulties, such as the lack of qualified personnel and the shortage of funds. This makes it all the more necessary for us to rely on the superiority of socialism in order to muster the necessary forces and organize comprehensive and large-scale cooperation and tackle tasks with concerted efforts.

When reviewing the history of our development of science and technology for national defense, we notice that the spirit of large-scale socialist cooperation runs like a piece of red thread throughout the entire process. In a sense, we can say that the history of the development of science and technology for national defense in New China is the history of large-scale socialist cooperation. Every achievement made in scientific research and every success scored in scientific experiments was the fruit of cooperation between different localities, sectors, and trades. Major scientific research and experimental projects in particular were usually accomplished through the cooperation of a dozen ministries and commissions under the State Council, a dozen localities, and different PLA units.

In the early stages of the development of nuclear weapons, the Chinese Academy of Sciences placed sections of the Beijing Research Institute and the Lanzhou Institute of Modern Physics, the East China Nuclear Research Institute, and the Northeast Institute of Technical Physics under the Second Ministry of Machine-Building in order to fight a battle of annihilation with concentrated forces. The Academy also assigned its best scientists to help the Second Ministry. Among the leading scientists transferred to the Second Ministry at that time were Qian Sanqiang, Wang Ganchang [3769 3227 2490], Peng Huanwu [1756 2719 2976], Deng Jiaxian [6772 4471 0341], Zhou Guangzhao [0719 0342 0664], Yu Min [0060 2404] and Chen Nengkuan [7115 5174 1401]. In 1960, the Chinese Academy of Sciences transferred another 1,000 or so scientists to the Second Ministry. From the Shenyang Institute of Metallurgy alone, nearly 100 nuclear fuel scientists, including the Institute's deputy director, Zhang Peishuang [1728 3099 7208], were transferred to the Second Ministry. The Chinese Academy of Sciences and other departments concerned also made important contributions by conducting scientific research in support of the Second Ministry. Their research endeavors ranged from the assessment and prospecting of uranium ore and theoretical studies on the smelting and processing of nuclear fuel and the designing of atomic bombs, to analogous calculations for atomic bomb explosions, the detonation of explosive charges, and nuclear protection and nuclear explosion diagnostic techniques. In the space technology sphere, every research and development project and every experimental missile and rocket launch represented a paean for large-scale socialist cooperation. In

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May 1980, a missile aimed into the Pacific was successfully launched. This test was the coordinated effort of more than 30 ministries, commissions, and bureaus under the State Council, the Chinese Academy of Sciences, and relevant institutes of higher learning, the PLA general headquarters, the Navy, the Air Force, the Second Artillery, and various military regions, as well as relevant units from 27 provinces, municipalities, and autonomous regions. It was a classic example of army-civilian cooperation on a national scale. The "Long March II" rocket for instance, was the product of more than 4,100 cooperative projects involving practically all existing disciplines, trades, and departments. Some 1,300 factories and establishments across the nation took part in its development and production. To ensure the supply of various kinds of high temperature-resistant materials, high purity fuels, high-strength steel, precision alloys, rare metals, semiconductors, compound materials, and rare gases for the space industry, the departments under the State Council, scientific research institutions, and relevant factories, colleges, and universities have cooperated in tackling key problems. From 1960 to 1966, nearly 4,000 kinds of new materials were developed. The electronics and machine-building industries adopted strict management measures to ensure the development of products for the space industry. Very quickly, all the materials needed for building ballistic missiles were being produced in China.

In space technology, the testing of communications satellites is a very complicated task. In February 1979, the State Planning Commission and the National Defense Science and Technology Commission submitted to the Central Committee a "Report on the Development of Communications Satellites in China." This report quickly received the approval of the party Central Committee. In accordance with Central Committee guidelines, the National Defense Science and Technology Commission assumed overall responsibility for the development of communications satellites. The Seventh Ministry of Machine-Building was charged with the research and development of missiles and communications satellites; the Fourth and Seventh Ministries of Machine-Building were charged with the research and development of ground control systems; the Fourth Ministry of Machine-Building was charged with the research and development of satellite communications ground stations; and the National Defense Science and Technology Commission was charged with the construction of launch centers. Under the unified planning of the state and the organization and command of the National Defense Science and Technology Commission, more than 20 provinces and municipalities and hundreds of units took part in this project. They made concerted efforts to tackle various technical problems with concentrated manpower, material, and financial resources and successfully completed testing of China's experimental communications satellite. It has been conclusively proved by facts that the launching of large-scale socialist cooperation, and the mustering of the forces of various quarters to jointly tackle problems, represent an effective

organizational form for developing scientific and technological undertakings for national defense and for tackling major tasks of scientific research under existing conditions.

This kind of large-scale socialist cooperation of ours fully embodies the superiority of socialist countries. Under the unified leadership of the party and the state, and relying on large-scale cooperation involving the scientific and technological fronts of the whole country and the whole Army as well as all civilians and army personnel, we managed to produce a number of advanced new model rockets within a few years at a relatively low cost. In short, concerted efforts, unity, and cooperation are not only where the superiority of socialism lies, they are also effective guarantees for the healthy development of science and technology for national defense. In order to remain invincible and intensely competitive in the field of science and technology, we must continue to carry forward this superiority in the days to come.

**4. Socialist and communist ideological and moral qualities are a source of vitality for the success of science and technology for national defense.**

The history of the establishment and development of our science and technology for national defense proves that arming the minds of the vast numbers of scientific and technological personnel with Marxism-Leninism-Mao Zedong Thought, doing a good job of ideological and political work in scientific research and experiments, and fostering socialist and communist ideological and moral qualities among science and technology for national defense front cadres are sources of vitality for the success of science and technology for national defense.

In science and technology for national defense, an important expression of this mighty spiritual drive is the spirit of self-reliance and hard struggle. We confronted many difficulties in the early stage of establishing our science and technology for national defense and found ourselves at an impasse during the three difficult years and when the Soviet Government unilaterally tore up all contracts and recalled its experts. However, the vast numbers of scientific and technological personnel engaged in science and technology for national defense were not the least intimidated by difficulties. Rather, they sonorously put forward the slogan "quietly immerse ourselves in hard work and attain national prosperity and strength through self-reliance." This political superiority and political strength heightened the national spirit of self-strengthening among the vast numbers of scientific and technological personnel and all commanders and fighters and strengthened their confidence and courage in overcoming difficulties. In order to promote the cause of science and technology for national defense, they worked against all odds, defied difficulties, worked with one heart and one mind, embraced the great objective of winning honor for the country and credit for the party, and turned pressure into drive. Three months after the total scrapping of contracts by the Soviet Government, we successfully launched our first replica

short-range missiles. Three years later, we successfully detonated our first atomic bomb. These "unprecedented successes" represented the victory of the spirit of self-reliance and hard struggle.

The spirit of self-reliance and hard struggle found particularly salient expression in various testing grounds which functioned as the windows and forward positions of science and technology for national defense. Some of these testing grounds were built shortly after the founding of the People's Republic; some were built during the period of economic difficulties in the late 1950's and the early 1960's; and some were built during the Cultural Revolution. In terms of geographical locations, most of these testing grounds were built in the Gobi Desert, in deep mountains, on barren wastelands, and on the coastal islands. One could well imagine the adverse environment and difficult conditions in these places. For instance, take China's first missile and satellite launching site and nuclear weapon testing ground. They were both built in the Gobi Desert in the great Northwest. "No bird flies in the sky and no grass grows on the ground. Not a single soul can be found in this vast land, where pebbles are swept off the ground by the wind." This is a true picture of the adverse environment there. When the grounds were first built, many leading scientists and large numbers of scientific and technological workers gave up their well-paid jobs and their good lives abroad, or their comfortable working and living environments in other parts of the country, and went to work in the Gobi with the lofty aspiration of winning honor for the motherland and credit for the people. Alongside other pioneers working on the missile and satellite launch site, they chanted the sonorous slogan "We make our homes here and feel it a joy to work under harsh conditions. When we die here in the Gobi, we will rest forever beneath the green mountains." At the nuclear test site, the vast numbers of scientific and technological workers and commanders and fighters pledged to "strike roots and settle down in the Gobi." They lived in tents and ground holes, drank bitter-tasting water, withstood severe winters and hot summers, and braved sandstorms. With their own bare hands, they built roads and houses, reclaimed wasteland for cultivation, carried out afforestation, and built ditches for drainage. Eventually they overcame the difficulties and established a firm foothold. Through decades of arduous efforts, a modern space center and nuclear weapon testing ground were built in the barren Gobi Desert.

Another important manifestation of this mighty spiritual drive is the spirit of quiet and selfless dedication. This spirit represents the true color and virtue of the vast numbers of scientific and technological workers and commanders and fighters on the science and technology for national defense front; it is also an important reason for the tremendous achievements made by our scientific and technological undertakings for national defense over the past 40 years. Defying personal fame and gains, comrades working on this front shed their heart's blood, immersed in hard work, and quietly dedicated all their wisdom and resourcefulness to the rise of the Chinese nation and the building up of China's defense strength. Over the years, some of them sustained injuries or were maimed and some even sacrificed their lives for the great leap in science and technology for national defense. As the moving deeds recounted in the film "The Motherland Will Never Forget" show, the names of these heroes and their achievements were mostly unknown to the public. It was precisely this spirit of selfless dedication and these brilliant achievements that made these people the elite of the motherland and the backbone of the nation. Through this film, many of us have come to know the names of heroes like Wang Ganchang, Deng Jiaxian, Cheng Kaijia [4453 7030 3946] and Chen Guangyu [7115 0342 1342], who lived incognito and quietly dedicated their services to the motherland and their heroic deeds. Actually, there are tens of thousands of other people like them who defied personal fame and gain, applied themselves to their career, and made outstanding contributions to the motherland. They represent a long-tested and indomitable army of world-level scientists and technicians.

On the science and technology for national defense front, it is not just the large numbers of scientific and technological workers who have this spirit of quiet and selfless dedication. The vast numbers of commanders and fighters and staff and workers fighting on this front, as well as their dependents, also have this noble quality. With the resolution to make contributions toward the cause of science and technology for national defense, they have, over the past decades, firmly embraced the idea of "dedicating one's youth and one's whole life and posterity" to this cause and struck deep roots in the Gobi Desert and the coastal islands. It is because China has these fine sons and daughters that it has been able to advance more swiftly in its science and technology for national defense.

**Report Notes Changing Trade Patterns**

91CE0658A Beijing GUOJI JINGMAO XIAOXI  
in Chinese 25 Jun 91 p 1

[Report by He Jing: "Tremendous Changes in Taiwan's Trade Situation"]

[Text] According to foreign newspapers, the Taiwan authorities are increasingly disturbed by Taiwan's surprising trade figures for the first four months this year. As indicated by the figures of Taiwan's Customs, compared with the same period last year, in the first four months this year Taiwan's trade surplus with the United States fell 35 percent. But the trade surplus with Europe had a rapid increase of nearly 300 percent, and the trade deficit with Japan increased by 20 percent. According to figures published by the Taiwan authorities, regarding Taiwan's trade with the United States for the first four months this year, exports fell to \$5.3 billion, a decrease of 9.7 percent from the same period in 1990, imports increased 5.2 percent, amounting to \$4.65 billion; and the trade surplus decreased by 35.7 percent as compared with \$1.65 billion for the same period last year. The share of exports to the United States in Taiwan's total export has presently fallen to 28 percent from the peak of 48 percent in 1985. Last year, Hong Kong replaced Japan as Taiwan's second largest export market after the United States. Trade between Taiwan and Hong Kong reached \$4 billion by this year, a 43 percent increase. However, 40 percent of that was indirect trade with the mainland.

Last year, Taiwan's foreign trade was thirteenth place in the world. Despite the continuous increase of exports, the total trade surplus—which is the root source of Taiwan's enduring trade friction with many countries—has decreased by 26 percent now. If the trend continues, Taiwan's foreign trade will register a balance or even deficit in the next two or three years.

The reason for this change has been the tremendous changes in Taiwan's trade situation. Taiwan's Ministry of Economics has analyzed this.

According to Taiwan's Commission on Foreign Trade, Taiwan's foreign trade situation is under the attack of the direction of flow of investment capital. One official of the commission said: "We have recently discovered that over 2,500 of Taiwan's enterprises have invested

capital on the mainland, leading to an increase of 20 percent in the mainland's exports; this may have been the main reason for the fall in Taiwan's exports." Taiwan's enterprises are diverting huge amounts of capital to Southeast Asia, and particularly the Chinese mainland, for the purpose of evading rising wage costs on the island, increasingly strict pollution-control policies, and the insufficiency of labor and land.

Because Taiwan's enterprises are transferring labor-intensive productions to the mainland and Southeast Asia, the medium- and low-grade products exported by Taiwan are losing their competitiveness in the markets of Japan and the United States. This has worried Taiwan authorities.

Because of the weakness of the investment market (last year Taiwan's private investment fell by 8.8 percent) and the consumer market on Taiwan, and because of the strength of European currencies vis-a-vis New Taiwan dollar, Taiwan's trade surplus with Europe has by now surprisingly increased by 271 percent, amounting to \$1.16 billion. By April Taiwan's exports to Europe increased by 8.3 percent, amounting to \$4.7 billion, of which one-third was exported to Germany. The director of the European Department of Taiwan's Commission on Foreign Trade said: The main reason that Taiwan's imports from Europe decreased 0.2 percent was the large decrease in Taiwan's demand for foreign automobiles, luxury goods and industrial machinery.

Suppose that the trade imbalance with Europe is only a temporary phenomenon, then the two things that most worry the Taiwan authorities are: 1) the continuously growing trade deficit with Japan could finally become higher than the continuously decreasing trade surplus with the United States; 2) Taiwan will become increasingly over-dependent on the export of plastic raw and other materials, machinery and electronic parts to the mainland and Asia via Hong Kong, and will be able to maintain favorable trade balance only when exports to the mainland are kept brisk.

Taiwan's Ministry of Economics indicates that they will closely watch the trade situation over the next eight months, and may revise the overall trade policy in view of the situation. At the same time, the Ministry of Economics has adopted measures to restrict further investment on the mainland, and has begun to adjust the island's industrial structure.

### Financial Impact of Six-Year Plan

91CE0541A Taipei CHO-YUEH [EXCELLENCE]  
in Chinese No 80, 1 Apr 91 pp 72-75

[Article by Chang Wen-ch'uan (1728 2429 2938): "Conflicting Views on the Impact the Six-Year National Construction Plan Will Have on Interest Rates"]

[Text] **What impact will the Six-Year National Construction Plan actually have on money markets? Government officials categorically state that it "should not" have a great impact, while civilian academics suspect that it will push up interest rates or even cause inflation. Who is actually right? This article will provide readers with a thorough and believable approach to the issue.**

As the Six-Year National Construction Plan is gradually being decided, a controversy over its impact on Taiwan's economic system, and on money markets in particular, is gradually unfolding. While government officials categorically state that it should not have much of an impact, civilian academics are extremely suspicious. Each side copiously quotes authoritative works to the other, and the people—already lost in a fog of abstruse theory and too many numbers—cannot tell who is right or wrong!

Because people are faced with an issue of such vital impact and complex possible consequences, it has become necessary for CHO-YUEH to provide readers with a thorough, believable approach. This task has been undeniably formidable and unrewarding, mainly because it involves the following nearly unsurmountable difficulties: 1. Economists are still arguing endlessly over interest-rate theories and have not yet reached a final conclusion. 2. As government officials still have conflicting views on the Six-Year National Construction Plan itself, and as various versions that are unclear and difficult to follow appear, it is really hard for people to assess the plan correctly.

**When society's investment increases suddenly and sharply (such as with the national construction plan) and its savings do not increase correspondingly, interest rates are bound to rise.**

Before the matter is explored further, we must first exercise some patience by reaching an understanding of the controversy among economists over interest rate theories.

The earlier classical school called its interest rate theory the "loanable-funds theory," which held that interest rates were determined by investment (demand for loanable funds) and savings (supply of loanable funds). This concept, which evolved out of the most basic theory of the balance between supply and demand, held simply that commodities are exchanged for loanable funds, demand turns into investment, supply turns into savings, and prices are replaced by interest rates.

The Keynesian school, which appeared after the 1930's, holds that interest rates are determined by the supply and demand for money. Moreover, it holds that since the

money supply can be controlled by central banks, its graph is a straight line without slope. This theory is called the "liquidity preference theory."

While these two theories have touched off a great debate among economists over the last five or six decades, no conclusion has yet been reached, each theory has its strong points. Even Taiwan's current economics experts have conflicting views on the matter. For instance, while Kuo Wan-jung [6753 1238 1369], chairman of the Council of Economic Planning and Development and around whom the controversy over the national construction plan is focused, uses the liquidity-preference theory in his textbook *General Economics* (central banks in all countries now certainly tend to manipulate interest rates by controlling money supply), Mr. Chiang Shuo-chieh [5592 4311 0267], Taiwan's distinguished monetary theorist, believes that loanable funds are the factor that truly determines interest rates.

Mr. Chiang Shuo-chieh has explored this matter in a brilliant thesis, proving with a static equilibrium analysis that these two theories are interlinked and complementary. That is, money markets can be divided into loanable-funds markets and money-supply markets, so that when one market is balanced or imbalanced, the other one must be respectively balanced or imbalanced.

In fact, to simplify this point the "loanable-funds theory" is a concept of the "capital flow" of a society's "accumulated capital" (savings) and "expended capital" (investment) during a given period, while the "liquidity preference theory" is a concept of the "currency deposits" of a society's supply and demand for currency at a particular time.

Thus, the long-range factors that determine interest rates should be savings and investment. When a society's investment suddenly increases sharply (as with the national construction plan), but its savings do not increase correspondingly, interest rates are bound to go up. Moreover, only an increase in interest rates can reduce consumption and increase savings, and thus maintain price stability. If the government then increases the money supply to force interest rates down because it considers them too high, this increased money supply may go into consumption instead of savings. This will turn into demand pressure for commodities, add to the already skyrocketing demand for investment, and will inevitably be offset by sharp inflation. Such a possibility is precisely the greatest current misgiving that many economists have about the national construction plan.

An understanding of these theoretical causes and effects forces us to look again at the actual contents of the national construction plan, and helps us to theoretically reassess its possible impact on money markets and interest rates.

According to the information that CHO-YUEH has collected on the latest version of the national construction plan (collected from a work report Kuo Wan-jung

gave to the Legislative Yuan on 16 March 1991), the Six-Year National Construction Plan's fund makeup is roughly as follows: A total of 8.2 trillion yuan will be needed, 1.9 trillion yuan of which will be classified as government administrative expenses (in fact, this part is routine government expenses, so should basically not be included in any construction plan), while another 1.1 trillion yuan will be land transfer expenses (this outlay will increase the money supply or savings, but will not create direct commodity demand). Thus, only 5.2 trillion yuan will actually be used for public investment or construction.

Another 2 trillion of this 5.2 trillion yuan will be raised by public institutions for their own budgets. Thus, after deducting the estimated 700 billion yuan that will be opened up to civilian investment, the government's actual capital outlay will be only 2.5 trillion yuan. Adding in payment of 1.1 trillion yuan for land transfers, the government's demand for funds will be only 3.6 trillion yuan. Since estimates are that the government will be able to raise 2.5 trillion yuan in funding in six years, based on its running expenses over the years, the shortfall—i.e., the part for which government bonds will actually have to be issued—will amount to "only" 1.1 trillion yuan, or an average of less than 200 billion yuan a year over six years. Thus, the official verdict is that the Six-Year National Construction Plan "should not" have too great of an impact on Taiwan's money markets.

**The greatest defect in the whole national construction plan is that its funding sources and expense accounting are unclear. Once implemented, what will the plan actually cost the government over the next six years? How much of the cost will be government administrative expenses and how much will be capital outlays? How can any correct assessments or predictions be made when surprisingly there are still no clear figures on this?**

From the perspective of this verdict, the whole national construction plan is excellent and has incomparably bright prospects. Such a bright halo almost obscures its major flaws! These are as follows:

1. Are the administrative expenses of 1.9 trillion yuan actually newly increased expenditures, or do they include original administrative expenses? If they are original administrative expenses, they should not be included in the national construction plan. If they are newly increased expenditures, have they already been counted in future routine growth, or are they an additional increase in growth?

In a nutshell, the real question is, what will be the actual state of the future growth in government expenses? If national construction plan expenses are mixed with the normal growth of routine government expenses, it will be impossible to assess either the growth or the possible impact of government expenses over the next six years.

2. Officials from the Council of Economic Planning and Development have evidently "forgotten" to explain where the 2 trillion yuan in public institution investment

will come from. It seems that this is to be generated out of thin air, without passing through or having any impact on Taiwan's capital markets. Moreover, even in the 1989 fiscal year, when public institutions earned their greatest profits, their pretax profits amounted to only 150 billion yuan. Thus, it will be absolutely impossible for them to raise this money on their own, which will force them to rely on civilian or foreign debt. How could such debt not have an impact on civilian capital markets?

In fact, the greatest defect in the whole national construction plan is that its funding sources and expense accountings are unclear. Once this plan is put into effect, what will it actually cost the government over the next six years? How much of it will be government administrative expenses, and how much capital outlays? How can any correct assessments or predictions be made when surprisingly there are still no clear figures on this?

Moreover, a further analysis based on the "loanable-funds theory" shows that the real impact on the public and on interest rates certainly does not come from the amount of government bonds issued, but rather from the capital outlay—i.e., the 5.2 trillion yuan in substantive investment (including the 700 billion yuan opened up to civilian investment).

Spread over six years, 5.2 trillion yuan would require an average increase in expenditures of 860 billion yuan a year. The impact of this increased investment on Taiwan's capital markets can be discovered by looking at several other figures.

For instance, in 1990 Taiwan had a gross capital formation of about 940 billion yuan; one-half of this came from the civilian sector, the other from government and public institutions. In other words, adding in the Six-Year National Construction Plan, even if investment in other sectors does not increase, a growth in capital formation of over 90 percent—or 1.8 trillion yuan a year—would be required.

However, in 1990 Taiwan's gross savings amounted to only 1.2 trillion yuan, or more than 600 billion less than the gross capital formation needed if the national construction plan were included. In other words, gross savings would have to increase by 50 percent to pay for the plan.

This was a static analysis of only one year. If it were expanded into future trends, it might be even more pessimistic. Taiwan residents' interest in savings has decreased steadily in recent years, with 1990's gross savings increasing by only 1.8 billion yuan over that in 1987; this is a real increase of only 0.1 percent over three years. Thus, gross savings' share of GNP dropped quickly, from 38 percent in 1987 to 29 percent by 1990.

**There are many indications that hasty planning and poor coordination of the capabilities of many departments will reduce the size or slow the progress of the national construction plan. In addition, the funding for the national construction plan in 1992's central government budget is**

going to shrink 30 percent. Since the whole national construction plan will inevitably shrink in size or be delayed, it will have less of an impact on Taiwan's money markets than is anticipated.

It is quite obvious that if the national construction plan is carried out conscientiously, the future gap between savings and investment will be bound to grow ever larger, and interest rates will inevitably be forced up to increase the savings rate and cope with fund demand.

It is still hard to correctly estimate how high interest rates will actually have to go to achieve a balance. This is because savings did not used to be very sensitive to interest rates (Taiwan's past excess savings were caused by the large trade surplus and lack of investment controls). Thus, it is impossible to estimate the flexibility of interest rates (even though estimates have been made, they are likely to be inaccurate due to changes in the financial climate). A bold but superficial estimate is that interest rates must go up at least 3 to 5 percent. In other words, in the first year or two of the national construction plan, interest rates are likely to be 13 percent, or even more than 15 percent, and they will only come down gradually after savings catch up.

This estimate is naturally completely based on the premise of no government intervention. If the government decided to force down interest rates by increasing the money supply, that would naturally be another story. But by that time, even if interest rates were forced down, it could cause dreadful, even double-digit, inflation.

However, things are not likely to turn out so bad, because there are many indications that hasty planning and poor coordination of many departments' capabilities will reduce the size or slow the progress of the national construction plan. The amount of construction funding in the central government's 1992 budget—which has already been announced—that has clearly been set aside for the national construction plan is only about 650 billion yuan, or about 30 percent less than the 1 trillion or so yuan in the original version. Extrapolating from this, as the whole national construction plan inevitably shrinks in size or is delayed, it will have less of an impact on Taiwan's money markets than has been anticipated.

### Construction Firms Eye Six-Year Plan

91CE0599A Taipei CHING-CHI [ECONOMIC WEEKLY] in Chinese No 153, 2 Jun 91

[Article by Li Chung (2621 0022): "Salivating Over the Six-Year Plan—Construction Firms Hungry for a Piece of the Pie"]

[Text] The Six-Year Plan, with the total price tag of eight trillion yuan, has not only been become a big chip in Taiwan's economic diplomacy; in view of the lack of domestic enthusiasm for investing, it is estimated that public spending over the next six years will be the main guiding force in the economy, for which reason domestic

construction firms and related enterprises look with great hope to the Six-Year Plan. Regardless of whether the piece of pie at stake is large or small, there is a benefit all around for businessman.

The type of construction involved includes roads, buildings, harbors, environmental protection, and bridges. The size of each piece of the pie is astonishing. The freeway around the island, for example, includes Northern Freeway No. 2 (24.1 billion yuan), the widening of the Chungshan Freeway (103.6 billion yuan), the Southern East-West Freeway (133.3 billion yuan), the Central South Freeway No. 2 (17.2 billion yuan), the controversial Taipei-Yilan Freeway (56.6 billion yuan), and the Central East-West Highway, which is being planned by the Taiwan Provincial Transportation Department (156 billion yuan). These projects total nearly 900 billion yuan.

In addition, the cost of the Six Metropolitan Area Rapid Transit System will be one trillion yuan, the biggest single item in the Six-Year Plan. It includes Taipei (444.4 billion yuan), Kaohsiung (84 billion yuan), Taichung (180 billion yuan), Tainan (59.5 billion yuan), Taoyuan (32.9 billion yuan), and Hsinchu (70.6 billion yuan). The total length of the system will be 266 kilometers.

In the area of construction projects, plans by the Ministry of the Interior to develop new residential neighborhoods are attracting notice from construction firms. Twenty new residential neighborhoods with a total land area of 3184 hectares will be opened up within the next six years. There will be 308,700 units of housing, of which 203,700 will be financed by private investment and 105,000 will be low and medium income housing built by the government. The estimated investment will be 229 billion yuan.

Li Cheng-Min [2621 2973 3046], manager of the Central Taiwan Office of the San Ching Construction Company, an affiliate of the Linyuen Enterprise Group, states that San Ching hopes to participate in the construction of the Six-Year Plan's rapid transit lines as well as incinerators to be used for environmental protection. The company hopes to win the bid this year for the first two phases of construction of rapid transit lines in Taipei at a cost of about 5 to 10 billion yuan, and feels that its chances are good.

Mr. Li states that in order to qualify to bid, it is necessary to work together with an experienced foreign firm, which cannot take part in these projects unless it is certified to be of solid reputation and is one of the biggest firms in the industry. There are only about ten companies that meet these requirements, and when one considers the company's financial strength, one sees that only one or two successful bids will stretch any company to its limits. For example, the total cost of the two phases of rapid transit construction mentioned earlier will run to about ten billion yuan, and the construction firm will have to

be bonded up to one billion yuan. Only a firm with very strong financial resources can take part in such a large project.

In addition, San Ching Engineering intends to participate in construction of refuse incinerators. Although the bidding in 1991 is for international firms, San Ching could land a subcontract. In 1992 the Environmental Protection Administration will open the bidding to domestic firms. The plan calls for 11 incinerators, and the construction budget will be considerable.

Li Cheng-Min says that incinerators are generally built in 300-ton units. Taichung City and Taichung County each plan large 900-ton incinerators. With an approximate construction cost of 1.5 to 1.8 billion yuan per unit, a 900-ton incinerator would cost around 5 billion yuan. San Ching also plans to bid for environmental protection projects. As for public housing construction, there are too many clients and too many complications, and with San Ching's total business volume last year of 8 billion yuan, it will have all it can handle if it wins a bid for either the rapid transit lines or the incinerator project, so it does not intend to participate in the construction of public housing.

Nevertheless, construction firms in Taichung are eager to take part in public housing construction. In order to encourage private sector construction of public housing, the government has introduced a method by which construction companies may initiate proposals for public housing projects. The list of companies which have done so includes Ch'ang Yi Construction, Lung Pang Construction, Kwang San Construction, T'ai Tze Construction, Chan Ling Construction, Ch'iao Sheng Construction, Teh Ch'ang Construction, etc. In August, there have been proposals to the Bureau of Housing and Urban Planning for 2000 units of public housing. The main reason for this is that more than 20,000 households are on the waiting for public housing in Taichung City, and the list in Taichung County is up to about 5000, so the market demand is still high.

Shen Tso-Wen [3088 0155 2429], chief of the Taichung Municipal Public Housing Bureau says that Taichung city has provided about 4000 units of public housing between 1989 and 1991, and that 3500 units will be provided by the Six-Year Plan between 1992 and 1996, while Taichung city has submitted proposals to the Ministry of the Interior for a 90-hectare Chang Hsi New Residential District and a 60-hectare Chen Nan New Residential District, which would be part of the ministry's residential district plan. The city will buy this land one segment at a time over a certain period in order to obtain 25 percent of the land on which to build moderately priced housing.

Many architecture and construction firms in Taichung are also interested in securing public housing construction contracts from the government, including Chung Kwan Construction (which Mei You Mei Construction, Fan T'ai Construction, Cheng Pang Construction, and

Yung Feng Chan Construction pooled their funds to buy early this year), Teh Ch'ang Construction, Ch'i Fu Engineering, T'ai Fu Construction, Kwan Chun Construction, Chung Yang Construction, and Ti'en K'e Han Engineering. They also intend to organize themselves to lobby the government and persuade it to base the award of contracts in part upon the quality of work, and not solely upon capital.

"If a worker is to become proficient at his craft, he must sharpen his tools." Part of the immense funding for the Six-Year Plan will inevitably be used to import various machinery and technology, a fact which has attracted much attention abroad. Wu Shang-Ying [0702 1424 7751], chairman of the board for K'ai T'ai Corporation, which is the Taiwan agent for Niigata Engineering Corporation, says that according to statistics from Japan's Ministry of Finance, Japan exported 30.862 Japanese yen worth of machinery to Taiwan in 1990, a ten percent increase over 1989. Japanese firms estimate these exports to soar 50 percent in the first year of the Six-Year Plan, and to maintain about 20 percent growth every year thereafter.

Wu Shang-Ying says that the Japanese yen has long played a large role in every manufacturing industry in Taiwan. The main reason is that the yen has had the support of large, powerful interests. Secondly, the Japanese have continually innovated and improved through research and development, and they have done pains-taking market planning. As they sell technology they also export related machinery and peripheral equipment, thereby grabbing larger markets.

He states that Japan has a geographical advantage over Europe and the United States when it comes to prompt provision of maintenance and spare parts, for which reason manufacturing industries in Taiwan are highly reliant upon Japan. Taiwan was the third biggest importer of Japanese machinery in 1990, behind the United States and Thailand, and Japanese firms will not let the Six-Year Plan pass them by.

The Six-Year Plan will greatly expand domestic market demand for cement. Wu Lin-Ts'ung [0702 2651 5115], vice-president of Li Yang Cement Corporation, which has a cooperative relationship with Japan's Ube Cement, estimates that in the Six-Year Plan there will be 2 trillion yuan spent on construction. This will mean a 100 billion yuan market for cement. If this is distributed evenly over eight years, demand will increase 400 to 450 tons per year.

He states that cement produced domestically in 1990 for domestic demand amounted to about 17.4 million tons, and about 500,000 tons were imported, making a total usage of 17.9 million tons, while domestic production capacity is about 18.5 to 19 million tons. Part of that is sold domestically, about 1 million tons are exported. In addition, domestic cement production in the future will be limited by insufficient mineral resources in the West,

and the Six-Year Plan will boost demand. Given these conditions, there should be plenty of room in the market for imported cement.

Wu Lin-Ts'ung says that Li Yang Cement has built a 60,000-ton cement storage facility at pier 28 in Taichung Harbor, and that the company can import 1.5 to 2.0 million tons of bulk cement per year, which is like building a cement factory in Taichung. The company will be able to provide a steady supply of cement and gain a share of the market, primarily in the Taichung area.

High ranking officials in the Taichung port authority say that there are many other companies planning to build cement storage facilities in Taichung Harbor. Chia Hsin International Corporation, which has a cooperative relationship with South Korea's Tong-yang Cement Corporation, plans to have a 45,000-ton storage facility built by October of this year, and the Tung Ti Shih Enterprise Group has signed a contract with the Port Authority to complete a 60,000-ton cement storage facility there next year.

In addition, Kuo Chi Corporation plans to build a 45,000-ton storage facility. Huan Ch'iu Cement plans to build a 60,000-ton storage facility, and has recently been discussing a contract with the port authority.

If these storage facilities can handle double their storage capacity every month, they will provide at least 500,000 tons of imported cement every month that will compete with cement produced domestically to serve the need of the Six-Year Plan.

Although domestic firms are greatly interested in participating in the Six-Year Plan, there are problems that limit their ability to seize this opportunity.

Li Cheng-Min says that there is only a small number of domestic firms with experience in large construction projects, such as Chung Hwa Engineering, the Veterans' Engineering Department, and T'ang Jung. Most private construction firms do not have sufficient capability, so they may rely on cooperative relationships with foreign partners for many contracts. Many Japanese construction firms, such as Kumagai Gumi Company and Kojima Corporation, took part in the 10 major infrastructure projects of the 1970's, and they are expected to land many projects behind the scenes.

Records at the Taiwan Regional Construction Union indicate that many Japanese construction firms, such as Kumagai Gumi Company, Taisei Corporation, Shimizu Corporation, Ohbayashi Corporation, Tokai Kogyo, and Kagawa, have affiliations with domestic firms. Others, such as JDC Corporation, Toyo Construction Company, Nishimatsu Construction, Tekken Construction, Chisaki, Takenaka Komuten, and Aochi Corporation, are involved in technological cooperation with domestic firms.

Such relationships exist between: the Veterans' Construction Department and Kojima Corporation; Ta Lu Engineering and Tekken Construction; Hu Chu Construction and Kumagai Gumi Corporation; Hsin Ya Construction and Nishimatsu Construction; Chung Hwa Engineering and Nishimatsu Construction; Fan Ya Construction and Chisaki; and San Ching Engineering and Tokyu Construction. In addition, Li Ch'eng Corporation has a cooperative relationship with South Korea's Samsung. All of these relationships facilitate participation of foreign construction firms in the Six-Year Plan.

The architect Ho Chao-Hsi [0149 5128 0823] states that there are 60,000 people employed in the domestic construction industry at an average per capita output of 3 million yuan per year, which means they can handle 180 billion yuan of business per year. This falls far short of the 700 billion yuan worth of construction business expected to be generated by the Six-Year Plan. This could crowd out private sector projects during the Six-Year Plan.

Huang Cheng-Yung [7806 2398 0516], president of Teh Ch'ang Construction, discussed the example of the public housing portion of the Six-Year Plan, stating that the government plans to build 115,000 housing units during the Six-Year Plan, which will put a heavy load on the construction industry. Such problems as poor organization and personnel problems in some private construction firms could result in quality problems and difficulties meeting deadlines three or four years down the line. Construction firms should be aware of this pitfall as they compete for construction work.

Huang Cheng-Yung states that because government agencies have been offering high salaries to construction personnel, it is difficult for the private sector to hire people. For example, the government might hire a recent graduate from a university civil engineering department for more than 30,000 yuan per month to work on the high speed railway or the rapid transit system, while a private sector construction firm can only offer 20,000 yuan. Statistics indicate that current civil engineering graduates have an average of six employment opportunities each, which shows how difficult it is for private construction firms to hire people.

He states that government organs hire personnel away from firms on a temporary basis at high salaries, but in past experience with the Tseng Wen reservoir and the ten major infrastructure projects, as soon as the projects were finished the government had no choice but to cut the temporary personnel. It caused a fault line in the ranks of construction industry personnel which persists today. The Six-Year Plan should not repeat this mistake.

One person active in the construction industry who asked to remain anonymous states that people in the industry would like to take part in the Six-Year Plan, but there are many problems in the bidding process. For example, the amount of capital required of companies to register to bid for different projects often differs even

though all of them are classified as class A construction firms; sometimes 60 million yuan are required, sometimes the figure is 150 million. There is no valid reason for these restrictions.

Second, in the reasonable bid system, the base price of the government agency planning the project plus one-half of the base price of the Inspection and Planning Department represent 70 percent of the reasonable bid, and the average bid of all the firms participating in the bidding (minus those whose bids are more than 10 percent above or below the base price) accounts for 30 percent of the reasonable bid. The result is that everyone suspects that the Inspection and Planning Department simply determines beforehand to set its base price at 85 or 90 percent of the base price of the government agency planning the project, then juggles its figures to arrive at the desired base price, for which reason the reasonable bid is not really reasonable.

Huang Cheng-Yung suggests that government change the bidding system by eliminating the minimum bid, the reasonable bid, and capital restrictions. He suggests that the government combine a qualifications bid, inspection of the organization of the bidding firm, and scrutiny of the experience and financial resources of the bidding firm, as is done in advanced countries. The first priority should be to get the job done.

In addition, the Six-Year Plan is a good opportunity for the government to encourage domestic building firms to band together to make joint bids. Currently, one-third of all firms involved in building are mainly engaged in construction, and two-thirds are mainly engaged in architecture. With an undertaking as large and complex as the Six-Year Plan, joint contracting would reduce risk and enable the cooperating firms to share personnel and know-how. This practice is encouraged everywhere abroad. Hopefully the government agencies in charge of the project will consider adopting this practice to improve the capabilities of domestic builders.

Wu Shang-Ying states that our domestic firms, which have problems regarding financial resources and technology, will find foreign competitors quite formidable. The participation of foreign firms in the Six-Year Plan is inevitable. The government ought to demand an appropriate transfer of construction technology and equipment, and domestically produced materials should be used so that the Six-Year Plan will facilitate technological upgrading and strengthen our industry.

#### **Editorial on Foreign Investment, Trade Structure**

91CE0622A Taipei LIEN-HO PAO in Chinese  
2 Jun 91 p 2

[Editorial: "Looking at the Pleasing and Troubling Effects of Trade Structure Improvement From the Perspective of the Growth in Foreign Investment"]

[Text] When discussing "the impact and responses of changes in our trade structure" at its meeting the other

day, the Executive Yuan's Economic Construction Society's Advisory Committee pointed out that in terms of differences in goods or differences in regions, the changes in our trade structure are fairly clear. However, there is concern about the pattern of slowing down in the growth of exports and the attendant contraction of trade. Ours is a trading country; changes in the trade structure are important phenomena that merit notice of the important economic and financial significance brought on by these changes.

The mix of export goods and the growth of domestic industry are closely linked. In general they are also equivalent to a shift in the domestic industrial structure. In recent years, although the textiles and plastic manufactures that have guided our export growth in the past are still among the five most important export goods, the most important two export goods have been replaced by electronics and machine manufactures. Viewed optimistically, this is indirect evidence of the continuing success towards the goal of our policy to upgrade industry. Government authorities and all people should feel proud. But if examined from another angle, these changes are to some extent not unrelated to the flourishing growth of the foreign investment of our plants and business in recent years. This is because plants and businesses that invest abroad mostly ship out domestic machinery and even electronic equipment for use in the plants they establish in the area they invest in. Thus exports of machinery and electronic products accompany the growth in foreign investment and are a natural consequence of this growth. Yet part of the domestically deposited capital that supplies foreign investment may not continue to grow substantially and the regions that may provide the foreign investment may not expand in an unlimited fashion. Thus, once the foreign investment stops growing, or if it even contracts, the issue of whether improvements in the export mix, such as there have been in recent years, can continue is really cause for concern. In particular there is a limit to the capital that has been exported in recent years and the primary growth regions are the Asian market consisting mainly of Hong Kong and the mainland. Once foreign investment grows, export of capital may diminish. This will have a negative effect on our economic growth and is a problem that needs to be seriously considered today.

Examining things from an internal perspective, we can also point out that the enormous growth in foreign investment is primarily a way in which plants and businesses react to rises in wages domestically. Yet in the process of economic growth, nothing can prevent the wage standard from rising with the per capita earnings. Our present earnings per capita exceeds \$8,000, and is the necessary result of the wage standard being higher than in neighboring Southeast Asia and the Chinese mainland. And it is normal for some plants and businesses to continue to expand foreign investment. Looking at the historical facts of the development of transnational companies by the industrialized countries after World War II, as the pressure to increase relative

wages rose gradually each year, the first to leave were medium- and small-scale enterprises and the last to leave were the large-scale enterprises with their large foreign investments. This pattern is what formed the transnational companies and even evolved into the enormous multinational companies that have given people headaches in recent years. In our country, the departure of medium- and small-scale companies is a well-known fact. In the past year some large-scale companies have also prepared to start making trouble, and this is the key to things. The key is not that capital is flowing abroad, nor is it whether enterprises' roots are within the country; the key is that the country's financial laws are relatively backward. Facing this unstoppable trend, the primary task in restraining and managing transnational companies is to quickly strengthen the relevant financial laws so that foreign investment will get on the track of normal economic growth.

Continued growth of foreign investment is bound to evolve into slowing of growth of exports and accelerating the growth of imports. The former will occur because of the loss of previous markets due to foreign investment and the latter, in part because of the growth of return sales of goods produced abroad. Although this phenomenon is not yet very evident now, the problem of the direct and indirect impact that is taking shape cannot be overlooked. As for the direct impact, in the past 30 years high export growth has been the most important pillar of our country's high economic growth. In spite of the turning point of obtaining development of an internal demand industry due to the revolution in the service industry in our country, future continued growth of exports is still the indispensable dynamic of economic growth and the shrinking of exports because of a loss of export markets for whatever reason, and the goal of turning into an industrial country may become only a dream and economic activity may even stop. Thus for backward countries that are striving hard to catch up, the way to go is still industrial upgrading. We do not need slogans, we need industrial upgrading. Only in this way can there be new export goods to support export growth and maintain our country's goal of economic growth. As for the indirect impact, a halt to export growth and evident growth of imports may reduce the favorable current account balance. The flow of capital abroad created by the accompanying growth in foreign investment in the short term may cause a reduction in the favorable balance of international income. In the long term, if the industrial upgrading is ineffective, international income may change from a favorable balance to an unfavorable balance. On the surface, the development of favorable and unfavorable balances in international income will lead to a fluctuation of the exchange rate, and to some extent may play a role in automatically regulating international income. But as everyone knows, our country's financial activity may react swiftly and sensitively to changes in international income. A reduction in a favorable balance or even the appearance of a negative balance is a factor that causes domestic banks to tend to tighten up. In relaxing the economy we face

problems like this. How to maintain an autonomous, unbiased monetary policy is one of the largest challenges to monetary authorities. Although some countries may offer ideas to these problems that we could borrow, it will still be difficult to avoid some degree of financial turmoil if we are not concerned about them and plan some responses in advance.

In summary, the improvements in our country's trade structure in recent years definitely is encouraging, but when considered in conjunction with the growth in foreign investment, these short term phenomena have the potential for an unfavorable impact that is worrisome. Authorities in charge of the economy and finance should investigate these changes and consider the experience of the responses by the industrial countries and plan our country's long-term strategy in advance; otherwise, when the time comes it will be difficult to avoid tasting the bitter fruit that starts out sweet.

### **Economic Outlook for Last Half-Year Debated**

91CE0642A Taipei CHING-CHI JIH-PAO in Chinese  
16 Jun 91 p 3

[Article in CHING-CHI JIH-PAO: "Opinions Divided on Economic Outlook for Second Half of Year"]

[Text] The Taiwan economy has continued to recover, but not at a brisk pace. Some industries have been faring better than others and opinions are also mixed on the future outlook. Will the economy overall improve in the second half of this year? That will depend primarily on when plans for the six light industrial projects are finalized, how hard the government is pushing ahead with the six-year national construction plan, and the extent to which the international economy, particularly the U.S. market, will bounce back.

Double-digit economic growth was recorded in both 1986 and 1987, only to be followed by a continuous decline in the next three years, reaching a low 5.29 percent last year. Modest growth, between 6 and 6.5 percent, is forecast for this year. In May exports jumped 21 percent to hit \$6.8 billion, a historic high for any single month. But the opinion in the manufacturing and export industries seems to be that exports will not continue to grow so vigorously in the next few months to pull the entire economy out of recession.

### **Domestic Demand Now the Main Engine**

The fact of the matter is that exports have been a declining factor in economic growth over the years, while domestic demand has become the main engine of economic expansion.

According to statistics from the planning office of the Executive Yuan, merchandise and labor exports accounted for 46.5 percent of the GNP, down from 56.7 percent five years ago, a full 10 percentage point drop. The slack has been taken up by private consumption and public enterprises.

Private consumption fell sharply in the second half of last year. Consumer confidence recovered slightly when the Gulf war ended in February. However, since neither the domestic economy nor the world economy bounced back as strongly as predicted, private consumption grew a mere 4.4 percent in the first quarter of this year in real terms (after adjusting for inflation) and has continued to inch up in the second quarter. In July the wages of military personnel, government employees, and teachers were raised 6 percent, a smaller increase than expected, their effectiveness in stimulating consumption greatly reduced.

Li Te-hui [2621 1795 6540], public relations manager for the Pacific Chungkuang Department Store said, "Since the beginning of the year there have been signs that the general merchandise market has rebounded, but only haltingly. The reason is that consumers are still wary of increasing consumption in a major way." In his opinion, when effective demand on the domestic and foreign markets picks up and when the economic recovery is reflected in the consumers' wallets, then the general merchandise market will rebound more vigorously.

The auto industry, another industry driven primarily by domestic demand, was initially quite optimistic about the economy this year, an optimism subsequently diluted by the prospect of rising taxes and fees.

It may be too late to raise the automobile gas tax and license fee this year, but the Taipei Municipal Council has approved a measure to raise the parking fee substantially and the Department of Transportation is hard at work adjusting expressway tolls. Both developments are viewed by auto makers as having a negative impact on the industry in the second half of the year.

Yeh Yuen-hsien [0763 3220 4905], marketing manager for the Sanfu Motor Company, said sales were decent for all automakers in the first half of the year, a sign that the industry is gradually pulling itself out of recession, and business is expected to be fairly good in the second half of the year as well. However, there is fear that various government moves pushing up the costs of operating a car will soften the market for low- and medium-priced vehicles. To what extent? That remains to be seen.

Chen Kuo-jung [7115 0948 2837], deputy business manager for the Yulung Motor Company, said that despite growing congestion on the roads, the auto market would remain strong in the second half of the year as a result of the lack of public means of transportation. He said, "If the various expenses go up too fast, the consumer may yet be discouraged from buying a car."

The slow recovery in the real estate industry also explains the lack of optimism in a number of related trades. Lin Pai-shih [2651 0130 1395], general manager for the Taiwan Glass Company, said, "No sooner had we finished celebrating the completion of an expansion project than we were hit by a drop in export prices and a sluggish market."

Lin Pai-shih emphasized that while Taiwan's glass output would increase this year, the market was not expected to turn around anytime soon. Right now Taiwan Glass Company is doing everything it can to develop the overseas markets, but prices are very low and the profit margin is thin.

Tseng Chia-kan [2582 0163 1626], manager for the Kaichu Company, said that the rate of advance sales has gone up somewhat, but people in the china and brick industries, which lag the real estate industry, would have to wait until the second half of next year before they see any signs of a pickup. Kaichu Company is still in a wait-and-see mode.

Lin Ching-hua [2651 3237 5478], chairman of Yumei Enterprises, called furniture sales the "leading economic indicator" because as durables, office furniture is replaced only when times are good. A spate of new companies opening for business will also boost office furniture sales.

Between last January and April, however, sales dropped 11.8 percent at Yumei Enterprises compared to the same period last year, something the company had never experienced before in its 13-year history, according to Lin Ching-hua. Judging from the relations between office furniture sales and the economy, Lin Ching-hua said that "we are not out of the woods yet."

#### High Hopes for National Construction Plan

Be that as it may, Lin Ching-hua was optimistic about the economy in the second half of the year. The latter half of 1990 was marked by such unfavorable developments as domestic political instability and the outbreak of the Persian Gulf war. Output and sales in the second half of this year should easily outperform those a year ago.

Another major element in domestic demand is private investment, which slipped 8.8 percent last year and was flat in the first quarter of this year. Will plans for the six light industrial projects be finalized and construction start soon? Will the national construction plan be launched full steam in the second half of the year? It is answers to questions like these that will decide whether or not private investment will end the slide and resume growing again.

Internal investment by the "three treasures," namely Taisu, Nanya, and Taihua, will reach \$20 billion [new Taiwan dollars] this year and even more after the six light industrial projects are underway. As for investment in related industries, that will be incalculable. Besides the six light industrial projects, the national construction plan is something else on which industry pins high hopes.

Yang Hsien-yang [2799 0752 7122], deputy director of the Kaohsiung plant of Taiwan Cement Company, said, "Any growth in the cement industry would have to depend on whether or not the real estate market would

continue to prosper and whether the major projects in the six-year national construction plan are proceeding smoothly." (Wang Lo-chun [3769 2867 5028])

Despite the sharp rise in exports, some exporters are worried that this is just a fluke and that the economic rebound is not really as solid as the increase in exports in May would seem to suggest.

Lin Chin-piao [0491 6855 2871], chairman of the Chuta Machinery Company, said that the good performance on the exports front in May was mainly due to an increase in entrepot trade with the mainland and a "temporary" diversion of orders from politically turbulent South Korea. He said, "Anybody in the foreign trade business knows that this is a fluke."

#### Apparent Demand Widespread

Chiang Cheng-hsing [1203 2973 5887], deputy managing director for the Tahu Metals Company, also cited the false impression created by one fully loaded container cargo vessel after another sailing for Hong Kong even as no orders were reported to customs. He said, "Most of the exports are 'transshipped' to the mainland in a roundabout way, not really marketed overseas."

Chiang Cheng-hsing, who is in the canning business, also said, "Summer is a peak season for beverages, which means business for the canning industry also gets better." Yet he attributed the pickup in activity more to the upswing in the economy. Recently Tahu Company purchased an iron sheet printing machine and a pop-top can adhering machine. Chiang Cheng-hsing hoped that the new equipment would help the company diversify its line of products and increase their competitiveness to consolidate its existing market.

"Apparent demand" has also been noted in a number of small- and medium-sized processing industries.

Weng Chung-ming [5040 1504 6900], general manager for Tailien Industrial Company, said that output at his company rose 6 to 7 percent in the first five months of this year compared to last year. On a month-by-month basis, output in May climbed 12 percent over a year ago. He attributed this mainly to the rise in demand and increasing orders for handbags from all areas after the end of the war in the Middle East. Nevertheless, he did not expect this spurt in apparent demand to continue beyond September.

He said that while the economy has now recovered somewhat, the problem of labor shortages remain. Even when he receives orders, he cannot find people to fill them. As a result, he has no plan to expand and is actually thinking of building a plant on the mainland.

Chiang Chih-lieh [5592 1323 3525], deputy general manager for Lien Hsieh Enterprise Company, who is in the shoe-making business, said that the business climate in the nation has improved and prices have stopped rising recently, which should help industry. However, he

suggested that the turnaround might be due in part to the profits remitted home by the overseas plants of Taiwan firms.

He said that the rebound was also caused by a reverse flow of orders from the mainland. It may be that mainland plants in joint ventures have not been operating smoothly or that they have trouble meeting delivery dates. Still, the competitive pressure remains and the reverse flow of orders is a temporary phenomenon.

In the plastics industry, Lungtou Taisu Enterprise likewise took a dim view of the outlook for the petrochemical industry in the second half of this year. Wang Yung-tsai, general manager for Taisu, noted that the petrochemical industry is the leading basic industry in the nation and if that industry is having a tough time, there is a limit to how well other industries can do.

Wang Yung-tsai pointed out that one could not be optimistic about the short-term outlook for the petrochemical industry given the continuing slump in the basic raw materials industry and intermediate materials industry, currently both in a tailspin.

#### Short-term Outlook for Petrochemical Industry Gloomy

Su Chi-yi [5865 0796 6712], special assistant in the general manager's office at Taiwan Plastics Company, said that the depressed prices of intermediate petrochemical products in recent times reflect the drop in prices for raw materials. Even more important, however, it is a function of supply and demand. Amid boundless optimism about the markets in Eastern Europe and the mainland in the past, production capacity in the petrochemical industry expanded too fast. Hence the current overcapacity in the industry worldwide. Moreover, Taiwan itself is not producing enough basic raw materials, so factories and plants in the intermediate and final production stages are operating under capacity, thereby pushing up unit production costs. Besides, basic raw materials are overpriced. The result is a dim outlook for the industry.

Su Chi-yi said that polyethylene, polyvinyl chloride, and chloroethylene monomer are being traded at depressed prices the likes of which have been rarely seen in recent years. In the United States, a few raw materials plants have decided to close down temporarily in view of the abysmal prices. This gives us an idea of how bad things are in the petrochemical industry.

Su Chi-yi said that from his contacts with customers at the intermediate and lower ends of the production process, "nobody gets the feeling that the industry is on the mend."

Like the petrochemical industry, the iron and steel industry is also a primary type of industry. The latter, however, has a diametrically different view of the economy for the second half of the year.

Lin Mao-tsung [2651 5399 1350], general manager for Huahsing Enterprise, said that demand on the iron and steel market has been picking up and shows signs of spearheading an economic recovery. However, the international iron and steel market is still in a slump. The Taiwan economy used to be export-led. Now that has been changing in the past few years. Thus an expansion in the domestic market will help the iron and steel industry weather the recession and gradually revitalize it.

Take Huahsing Enterprise's steel tubes, for instance. In the second quarter both the supply and sale of office furniture tubes and water pipes were brisk. Sales, which hovered between 4,000 and 5,000 metric tons at the beginning of the year, have now risen to between 6,000 and 7,000 metric tons with a packed delivery schedule. Overall, while the market is not expanding robustly, it is showing signs of a recovery compared to the same period last year.

#### A Gradual Rebound for Iron and Steel Industry

Shipments in the third and fourth quarters are expected to stabilize and increase, providing further evidence of a upturn. In particular, the six-year national construction plan will be a shot in the arm for the construction industry, to the benefit of the iron and steel industry, among others.

Yang Chiu-yueh [2799 6726 1471], deputy general manager for Kaohsingchang Iron and Steel Works, said that the iron and steel market has improved significantly recently and both output and sales have bottomed out. With prices as well as volume on the upswing, chances are fairly good that the iron and steel industry would recover.

Kaohsingchang rang up NT\$520 million in sales in May, the highest for any one month in recent years. Judging from the sales figures, which most accurately mirror the strength of the market, the recovery will be sustainable.

At Kaohsingchang, order books for steel tubes were full for both June and July and the company is now taking orders for August and September. The growth in sales is expected to continue.

Yang Chiu-yueh said, "We can be optimistic about where the market is headed in the second half of the year. The six-year national construction plan, an exchange rate staying below NT\$27, and an expected drop in bank interest rates...all that will help boost iron and steel sales at home and abroad."

#### Editorial Discusses Overseas Investment Increase

91CE0642B Taipei CHING-CHI JIH-PAO in Chinese  
16 Jun 91 p 2

[Editorial: "Substantial Increase in Overseas Investment"]

[Text] According to statistics released by the investment commission of the Ministry of Economic Affairs, overseas investment by Taiwan between last January and

May soared 106.77 percent over the same period last year to reach \$943 million [new Taiwan dollars], including NT\$300 million invested in Malaysia by China Iron and Steel Company, making Malaysia the largest recipient of Taiwan's overseas investment dollars. Apparently these figures do not include investment by Taiwan companies in the mainland. While we certainly feel gratified with this achievement, we also believe there is room for improvement in the quality of our investment. The gratifying thing is that only when it reaches a certain level of economic development can a nation become a capital-exporting nation. In its early days of development, a developing nation needs to import capital from abroad because there is not enough at home. There will be a small outflow of capital for a number of particular reasons, but on the whole it is not in a position to invest overseas in a major way. That was the case with Taiwan before the 1970's. To accelerate economic growth, particularly to encourage overseas Chinese to invest in Taiwan, the government formulated regulations in 1960 to attract an inflow of capital and offered all sorts of preferential terms. Since the 1970's, however, as Taiwan piled up a trade surplus year after year, the government's foreign exchange reserves swelled and capital also became more abundant at home, increasing faster than the country could absorb. Under these circumstances, the government came up with the idea of liberalizing and internationalizing economic construction and encouraged overseas investment. The new Taiwan dollar rose sharply against the dollar. Not only did the government lift foreign exchange controls but it also raised the amount of funds a person can send out of the country, making it easier for businessmen to invest abroad.

However, the policy of encouraging foreign investment at the time was specifically targeted. What the government wanted was to steer the outflow of capital in three directions. First, develop resources abroad jointly with foreign businessmen and send some home for domestic use. Resource-poor Taiwan is not self-sufficient in certain key resources, such as metallic minerals, petroleum, and timber, precisely the sort of resources needed by industry at home. To make sure that the supply of raw materials is not completely in foreign hands, the government wanted Taiwan business to invest and develop resources overseas in cooperation with foreign companies so as to secure the right to use some of the resources developed. That will help economic construction back home.

Second, seek investment partners overseas and invest in high tech industries to gain access to technology that can then be applied at home. At that time the Taiwan economy had already reached a level where a structural adjustment and upgrading was long due. In other words, the time had come to develop technology-intensive industries. Given its limited ability to develop science

and technology, however, Taiwan must import foreign technology. And one way to gain access to foreign technology is to invest overseas jointly with foreigners.

Third, invest in a foreign nation directly by building a plant there to assemble parts, components, and materials manufactured in Taiwan, the finished products to be sold locally. Owing to rising protectionism overseas, it has become increasingly difficult to expand the exports of certain industrial products. One way to overcome protectionist barriers is to open a factory overseas and sell the finished products locally.

After years of development, the official policy of encouraging overseas investment has paid off, as demonstrated by the overseas investment figures this year. This is gratifying. If we analyze further, however, it seems that the government has not really succeeded in steering investment in the three desired directions. Apart from the Chinese mainland, most of Taiwan's investments today go to Southeast Asia, particularly member nations of ASEAN, with Malaysia capturing the lion's share. Broken down by industry, Taiwan's investments are concentrated in labor-intensive industries, the only exception being China Iron and Steel Company, and little goes to resource development. The reason most Taiwan investors end up investing in labor-intensive industries is that as labor shortages worsen and wages rise sharply at home, some of Taiwan's longstanding labor-intensive light industries, such as apparel, shoe-making, and toys, have been losing ground internationally even as they struggle to survive at home. With their low-cost labor, on the other hand, Southeast Asian countries have a good deal of potential for developing labor-intensive industries. Thus droves of Taiwan investors have been moving their funds and equipment to these countries, building and operating new plants using the local inexpensive labor. This kind of investment benefits both the investor and the host nation. It provides an outlet for the investor's capital and enables his products to compete on the world market so that he can still make a profit. As for the host nation, it helps it develop industry and train a technical work force, which can only accelerate economic growth. For Taiwan's overall economy, however, it offers little benefits and probably does more harm than good. First of all, the overseas market of the existing industries often ends up being taken over by the enterprises built elsewhere by Taiwan investors, which cuts into the exports of some traditional industries at home. In time the host nation would give us stiff competition on the world market. Second, when funds find a home in labor-intensive industry overseas, it slows down Taiwan's high-tech transition and also puts the goal of economic upgrading beyond reach. Third, the rapid growth of overseas investment has neither solved the problem of resource shortages nor contributed to raising the level of technology at home.

In light of the above analysis, while we are certainly pleased to see the substantial expansion of overseas investment, we are even more anxious to see an

improvement in its quality. Specifically, we hope more investment would be channeled into the three directions intended by government policy. To achieve this goal, the investment commission under the Ministry of Economic Affairs should assume a guiding role and, in conjunction with various foreign trade offices stationed overseas, look for appropriate investment channels and steer our capital into them. Only thus can investment truly contribute to economic turnover in Taiwan.

#### **Editorial States Concern Over Investment in PRC**

91CE0655B Taipei CHING-CHI JIH-PAO in Chinese  
28 Jun 91 p 2

[Editorial: "Open Black Box on Mainland Investment"]

[Text] The other day the president of the Executive Yuan, at a session of the yuan, after listening to a brief report on mainland investment given by Huang K'un-hui [7806 2492 6540], chief member of the Mainland Committee, gave instructions to the Ministry of Economic Affairs and the Mainland Committee, hoping that it would be done through the Straits Exchange Foundation, to improve the situation with respect to the collection among the people in the Taiwan region of mainland investment profits and losses, and to improve the guidance of people by creating better understanding so that they do not blindly invest in the mainland.

Ever since the Chinese Communists announced 12 years ago the policy of opening up to the outside world, by which they put all their strength on developing foreign trade and vigorously attracting foreign capital, not only have they drawn in funds from developed countries like Japan, America, and West Germany, but also they have drawn in a large amount of funds from the Hong Kong and Macao regions. Our government has reiterated time and again that businessmen must not make direct investments on the mainland and must not engage in direct trade with mainland regions. However, the businessmen, in pursuit of profit, early on, through all sorts of conduits, engaged in trade with the mainland, and one after another made investments on the mainland. Presently the Taiwan region still has a large surplus in this trade. However, there is a one-sided flow of investment from Taiwan to the mainland. After the June 4th Tiananmen bloody incident, there was a withdrawal of capital from the mainland and a wait-and-see attitude, which for a time caused the Chinese Communists economic difficulties. However, at this sensitive juncture the flow of Taiwan capital to the mainland not only was not affected; on the contrary, part of it replaced other foreign capital. Why did the Taiwan businessmen invest on the mainland? The main reason is that the mainland is also our territory, its people are our compatriots, and we are linked with them by ties of blood and a common language. Also, the mainland has abundant natural resources, cheap labor, and a vast market; but its people's livelihood industries are not yet fully developed. For the Taiwan businessman, with his solid assets, wide

experience, and dependable overseas markets, the mainland has a great deal of room for development. In the Taiwan region, labor gradually has grown insufficient, its wages have risen greatly, and the traditional labor-intensive industries have lost room for development. The most convenient way to bring about a "second spring" is to invest on the mainland.

The regions that Taiwan businessmen invested in at the beginning were in the two provinces of Guangdong and Fujian, and this was because of their convenient geographical features. However, investment on the mainland gradually shifted to Hainan Island and the Changjiang River Delta, particularly to Shanghai's Pudong area. In the north it reached to the nine eastern provinces as far as Harbin. In the northwest as far as Lanzhou and in the southwest as far as Yunnan, there is no enterprise that does not have Taiwan capital investment.

However, the perplexing questions are: In the final analysis, over the past 10 years how much Taiwan capital went to the mainland? In what industries was Taiwan capital distributed? What were the profits and losses of the Taiwan businessmen's investment? But there is no adequate data from which to make an analysis. It is as if the Taiwan businessmen's investment on the mainland had been put in a black box, and on its outside there is no indication how this black box works. Precisely because the data are inadequate, all sorts of conflicting and even contradictory information is continually being produced. In particular, after an investment is made will there be a profit? What will be the proportion of profit? Everybody says something different, and people are unable to agree what is correct. At an Executive Yuan session, Huang, the chief member of the Mainland Committee, cited data from a survey made by the head of the Taiwan Chamber of Commerce, which showed that there were a great many failures in the Taiwan businessmen's investment on the mainland: in the interior regions 50 to 60 percent of the investments lost money, and in the southeastern coastal regions 60 to 70 percent of the investments did not make money. Information we have obtained from other sources confirms these figures. All investments that made money were land speculation, and this speculation has drawn the attention of the Chinese Communists.

The reason that there is a lack of data to make an analysis is that the businessmen who have invested on the mainland, because of many fears, are basically unwilling to make public their situation. Because, in principle, the government does not permit businessmen to invest on the mainland, if they were to go public they fear that the government would punish them for breaking the law. After investing, if a businessman actually makes money, he fears that if this is disclosed he will have a tax problem; therefore, although he made money he is unwilling to admit it. If he loses money, because of the "face" problem, he is even more unwilling to reveal his loss. Under these circumstances, in which the truth is a closely guarded secret, it is naturally impossible to get accurate data.

To help the businessmen the Ministry of Economic Affairs once called on them to report on their investment preparations and promised that it would not use the investment preparation report data to restrain them; on the contrary, after reporting their preparations the government would give the businessmen the necessary assistance, e.g., permitting them to import intermediate manufactured products into the country for use by the processing industries. However, even if this were the case, the businessmen's psychology of apprehension was not dispelled, and many of them still did not report their preparations on schedule.

We discovered among the businessmen the following psychology: they think that their own intelligence and wisdom, as well as their many years of experience in engaging in entrepreneurial activities, are sufficient to cope with all situations created by the Chinese Communists on the mainland without coming to grief and being duped. To be sure, among the businessmen there are past masters with a strong ability to cope. However, please don't forget that the particular system of the Chinese Communists, as well as the distinct work style formed under this particular system that is not warranted by common practice, brings about a situation that is far from being one that the businessmen can cope with in a market economy in line with the rules of competition to gain profits and be successful. Therefore, an investment venture that, through a carefully thought out plan, can clearly be profitable, because of all sorts of unexpected factors will lose money. If more than half of the Taiwan businessmen who invest on the mainland really lose money, we believe that the reason lies in this fact.

To safeguard the interests of Taiwan businessmen who invest on the mainland, and to provide them with data for planning this investment, it is necessary to collect information on their profits and losses there. But the particular nature of the situation obtaining between the two sides of the strait makes it very difficult for government departments to collect this information. At an Executive Yuan session Economic Affairs Minister Hsiao [5618] pointed out that manufacturers and business firms still have misgivings about the data provided by the government and that, therefore, his ministry will commission an academic organization to survey the profit and loss situation of manufacturers and business firms that invest on the mainland in order to provide reference material for policy decision making. We that only The China Economics Institute can undertake this task. Because it has a mainland research institute not only does it have abundant talents and the data it collects on the mainland are complete, but also it often sends researchers to the mainland to make on-the-spot inspections and to interview Taiwan businessmen. With its objective, detached posture and its thorough analyses, the institute can certainly obtain the trust of the businessmen. If we entrust the institute with the responsibility for collecting these data, the expected results can

be obtained. For its part the Straits Exchange Foundation should give the institute the necessary assistance in this respect. If the matter is handled in this way, we believe that the black box on mainland investment will be gradually opened.

### Article Views GATT Issues

91CE0656B Taipei CHING-CHI JIH-PAO in Chinese  
30 Jun 91 p 3

[Article by Kuo Chien-chung (6753 1696 0022) and Ts'ai Hung-ming (5591 1347 2494): "GATT and the Relations Between the Two Sides of the Strait." Kuo Chien-chung is an administrator in the International Affairs and Financial and Economic Affairs Group of the National Policy Center, and an associate professor in the Three Principles of the People Research Institute of the National Taiwan University; Ts'ai Hung-ming is a policy researcher of the National Policy Center]

[Text] At the same time that our countrymen are deeply concerned about the economic and trade relations between the two sides of the strait, the discussions in the United States on whether to give the Chinese Communists most-favored-nation status has again caused our countrymen to pay attention to the issue of the two sides joining the GATT. Exactly what is the solution to this complex difficult problem, caused by more than 40 years of disputes? How would the joining of the GATT affect the development of economic and trade relations between the two sides? These are questions worthy of deep thought by our countrymen.

### Chinese Communists' Negotiations on Joining the GATT is Slow Process

To achieve their policy of the four modernizations, the Chinese Communists formally applied for membership in the GATT in July of 1987. Although the United States, the EC, and other principal trading countries lean toward bringing the mainland into the GATT system because of its vast market of 1.2 billion people and its influence on developing countries, they realize two facts: First, it is doubtful whether the Chinese Communists with their totalitarian economic system will be able to change their economic principles after carrying out economic reform or joining the GATT. If these countries rashly allow the Chinese Communists join the GATT, they will find it impossible to realize their essential negotiating interests. Because of this misgiving, the negotiations have been quite slow. In addition, the Tiananmen incident has practically caused the negotiations to be shelved. It is thus obvious that the economic system of the Chinese Communists is the obstacle to their entry into the GATT. Although the Chinese Communist officials have declared that the open policy has not changed, for Western countries, lip service like this is not as credible as the comprehensive political and economic reforms of Eastern Europe. As everyone knows, since New Year's Day the year before last, when our

country, in the name of the Taiwan-P'eng-hu-Quemoy-Matsu tariff region, applied to join the GATT, the biggest problems we have encountered have stemmed from the political situation. Although formal membership in the GATT requires approval by over two-thirds of the members, the most important key to membership is the attitude of the main member countries, such as the United States and the EC countries. When the EC established diplomatic relations with China in 1975, it recognized the Chinese Communist Government as the sole legal government of China. The Chinese Communists view our application to join the GATT and the other countries' support for it as a major threat to relations between the EC and China, and this has caused the EC to wait for the United States' decision. Out of consideration for its own diplomatic and economic interests, the United States has maintained a reserved attitude and this has put our joining the GATT in a chaotic, unclear state for two years.

Because of the end of the Cold War and the detente in U.S.-Soviet relations, the U.S. Congress no longer unconditionally extends MFN status to the Chinese Communists as a matter of course. As a result the House Appropriations Committee has demanded that the Chinese Communists "relax" their position on Taiwan's application to the GATT, and has demanded that the Chinese Communists respect human rights and refrain from advocating or engaging in nuclear proliferation. The Bush administration's position toward a draft resolution on this matter is still unclear, although it has indicated that it would reconsider Taiwan's application to the GATT. The future attitudes of the United States and the EC will be worth watching.

### Chinese Communists' Foreign Trade Policy Face Many Obstacles

It cannot be denied that under the circumstances of global marketization arising from postwar global trade and the development of science and technology, rough spots in the economic and trade relations between the two sides of the strait are a rare phenomenon. As for the Chinese Communists, when they "launched" their foreign trade policy of "economic and technological exchange and cooperation," they faced many obstacles. Perhaps joining the GATT will help improve the mainland's foreign trade relations, but with their present system, they seem a long way off from meeting the GATT's standards and criteria. In addition, because Eastern Europe and the European part of the Soviet Union are offering Western countries huge market opportunities, the Western countries' will raise their criteria. Even if they succeed in joining the GATT, the mainland will certainly have to pay a high price for their admission ticket; specifically, they would have to open their markets on a large scale or allow trading partners to reduce Chinese imports without being subject to negotiations.) [single parenthesis as published] Compared to Taiwan's application to join the GATT, "detente" seems to have been an opportunity for the Chinese Communists to join the GATT at a low cost. In fact, Taiwan's

application to the GATT in the name of representing the foreign commercial relations of the Taiwan-P'eng-hu-Quemoy-Matsu region only shows that it has the ability to sign treaties on matters covered by the GATT, and this does not conflict with the One China policy. This should be the universal, unbiased view of the GATT member countries.

With respect to economic and trade relations between the two sides, although the volume of indirect trade was \$4 billion last year (a growth rate of 16.08 percent) and reached \$470 million in April of this year (a 42.4 percent growth over that during the same period last year), other facts show that trade between the two sides is gradually expanding and a political obstacle still exists (this obstacle is also related to and affects Taiwan businessmen's investment on the mainland). The direct trade advocated by the Chinese Communists remains a matter for the indefinite future. With regard to this impasse, the changeable standards within the GATT framework should provide a direction we should think about. In other words, if the Chinese Communists and Taiwan were to join the GATT at the same time, the economic and trade systems and the laws and regulations of the two tariff regions would be brought under the GATT's standards and surveillance. [preceding word in English] The current irregularities in the trade interactions between the two sides would be eliminated and the number of artificial distortions would be reduced. (As for whether the two sides will use Article 35 of the GATT to do away with applicable provisions, one would have to look at the political and economic situations at the time to make such decisions.) The authorities on the two sides of the strait may have different views on how to achieve China's unification, but they must not forget that joining the GATT is their common objective.

#### We Need Not Expect a Well-Meaning Response

As for us, perhaps joining the GATT will bring with it pressure to open up more, but all countries have affirmed the momentum and results of our government's trade liberalization in recent years. Joining the GATT no doubt could cause our present bilateral trade relations to advance to multilateral trade relations and reduce the distortions of bilateral trade. What is more important is that we will have the opportunity to devote mental and physical efforts to the GATT multilateral trade system. Although South Korea could establish diplomatic relations with the Chinese Communists in the near future, the establishment of formal diplomatic relations with South Africa is a possibility. However, just as we support the GATT system, the Asia-Pacific Economic Cooperation Conference (APEC) also provides us with the opportunity to actively expand cooperation and coordination in regional economic trade and policy to attain the common prosperity of all. APEC's willingness to allow simultaneous entry of the two sides of the strait and Hong Kong allows the two sides the opportunity for mutual action in international organizations. We do not

need to expect a well-meaning response from the Chinese Communists on the issue of our joining the GATT at the same time that they do. The mainland authorities after all, should make their plans out of consideration for their long-term developmental interests.

#### We Should Urgently Lay the Groundwork for Development

What we should do is: (1) We should as quickly as possible to examine our current economic and trade system in view of our application to the GATT in order that we may make adjustments to have a suitably open system and economic structure. (2) We should vigorously engage in industrial upgrading and lay the groundwork for development. (3) We should vigorously develop economic and trade relations and fundamental diplomatic relations with all countries. In particular, we should rely on the participation of advanced countries in our Six-Year National Construction Plan by first assimilating scientific and technological input from advanced countries and, second, by obtaining their support. (4) We should vigorously develop trade and investment with Europe and other regions because, in the final analysis, it is the global market upon which our livelihood depends.

#### Formosa Plastics Chooses Naphtha Cracker Plant Site

OW0708174391 Taipei CNA in English 0821 GMT  
7 Aug 91

[Text] Taipei, 7 Aug (CNA)—The site and other information about Formosa Plastics Corp's new 90 billion NT [new Taiwan] dlrs (3.3 billion U.S. dlrs) naphtha cracking plant will be announced in the next two days, Formosa Plastics President Wang Yung-tsai said Tuesday.

Mailiao, Yunlin in southwestern coastal Taiwan is thought to be the best place to house the new 1,400-hectare Formosa Plastics plant.

Formosa Plastics has spent nearly four years choosing a suitable site to house its much-publicized investment project. Construction of the new naphtha cracker has been delayed by the opposition of local environmentalists and skyrocketing for real estate prices.

The Formosa Plastics' new naphtha cracker will be Taiwan's sixth such plant. Chinese Petroleum Corp., has four naphtha cracking plants and is constructing a fifth in Houching, Kaohsiung.

The six naphtha cracking plant will not only help resolve petrochemical shortages but stimulate private investment willingness, the Ministry of Economic Affairs (MOEA) said.

If downstream demand for petrochemical products continues to increase, it will consider proposals to construct a seventh and eighth plant, MOEA stated.

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